COMPONENT SKILLS OF READING AMONG LEARNERS OF CHINESE AS A SECOND LANGUAGE

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To my grandmother, Xiuying Zhang, my father, Ximin Zhou, my mother, Shuzhen Ma, my husband, Chenghua Gao, and my daughter, Jingchen Gao

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ABSTRACT

The component-skill approach to reading comprehension (Carr & Levy, 1990) intended to understand reading as a complex but decomposable component-skill system where various component skills contribute to reading comprehension while interacting with each other. Even though significant progress has been made in understanding how various component skills collaborate to contribute to second language (L2) reading comprehension (e.g., Jeon & Yamashita, 2014; Grabe, 2009), there is a lack of empirical studies that examine the component skills of L2 Chinese reading.

To fill this gap, this dissertation examines the direct and indirect effects of semantic radical knowledge, character knowledge, morphological knowledge, vocabulary knowledge and grammar knowledge to L2 Chinese reading. Using a mixed method research approach, this dissertation investigates the direct and indirect effects of components skills on L2 Chinese reading, the component skills that distinguished high-skilled, middle-skilled, and low-skilled readers, learners' perception of L2 Chinese reading, as well as the convergence and divergence of quantitative and qualitative data.

The participants of this dissertation were 209 learners of Chinese as a second language (CSL). A test battery with 12 subtests were designed to measure six latent constructs, including receptive semantic radical knowledge test and semantic radical meaning matching test (to measure semantic radical knowledge); lexical decision test and character knowledge test (to measure character recognition); morpheme discrimination test and compound structure discrimination test (to measure morphological knowledge); receptive vocabulary knowledge test and vocabulary synonym test (to measure vocabulary knowledge); word order test and grammaticality judgment test (to measure grammar knowledge); a multiple-choice reading comprehension test and a cloze test (to measure reading comprehension). Thirteen interviews

and four focus groups were conducted among 25 participants.

The main findings of the study include:

(1) Vocabulary knowledge was found to have a significant direct effect on L2 Chinese reading comprehension. Semantic radical knowledge had a significant direct effect on Chinese character recognition. Morphological knowledge had a significant direct effect on vocabulary knowledge and a significant indirect effect on reading comprehension through the mediation of vocabulary knowledge. Grammar knowledge was found to be measures of reading comprehension.

(2) The receptive vocabulary knowledge test and vocabulary synonym test scores could best distinguish high-skilled, middle-skilled, and low-skilled readers. This further established the significant role of vocabulary knowledge in L2 Chinese reading.

(3) The learners perceived that characters, understanding the meaning of a passage, and words were important in L2 Chinese reading. The majority of the interviewees viewed reading in Chinese as difficult. Using dictionary and guessing from the context are the two most frequently used strategies for unknown characters. The interviewees improved their Chinese reading through reading Chinese books and reading online.

(4) The quantitative and quantitative data supplemented each other. Both data sources converged on the main findings of the study. There are cases where the qualitative data did not directly support the quantitative data. The qualitative data also provided elaboration and clarification for the quantitative data. A combination of quantitative and qualitative data revealed a more complete picture of L2 Chinese reading.

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CHAPTER 1
INTRODUCTION

1.1 Objectives

What is important in learning to read in Chinese? Is it Chinese characters, words, or grammar that makes reading in Chinese difficult? What variables can predict readers' reading proficiency levels? What do L2 readers think of reading in Chinese? All those questions have lingered in my mind for so long that I try to find answers for them in the literature. However, there is a scarcity of research on L2 Chinese reading compared to L2 English reading or first language (L1) Chinese reading.

Reading comprehension is a complex activity that requires various component skills to cooperate with each other and interact with each other. Researchers have long been interested in the component skills of reading comprehension. Carr and Levy (1990) approached reading comprehension from a component-skill approach. According to them, the component skill approach intends to "understand reading as the product of a complex but decomposable information-processing system" (p. 5). This approach attempted to model reading ability by viewing reading as composed of a set of theoretically distinct and empirically isolable components. The strength of this approach is that it can provide insights into the foundations of reading comprehension, which cannot be obtained from a single-factor approach.

The component skills that Carr and Levy (1990) and the contributors of the book considered included language skills like word recognition skills, and comprehension skills like listening comprehension and working memory (Please see the concluding remarks in the book, pp. 424–437). Alderson (1984) raised an oft-discussed question whether reading in a foreign language is a reading problem or a language problem. That is, whether success in reading in a

foreign language depends on one's reading ability or knowledge of the foreign language. The answer of component-skill approach to this question is that language skills like word-level skills and comprehension skills both play a direct and primary role (Carr & Levy, 1990, p. 432). Alderson's (1984) answer to this question was that it is both a language problem and a reading problem, but with firmer evidence that it is a language problem. However, it was not clear what aspects of the foreign language played a significant role in L2 reading comprehension.

In a meta-analysis study on L2 English reading, Jeon and Yamashita (2014) examined the contribution of ten component skills to reading comprehension. The results showed that L2 grammar knowledge, L2 vocabulary knowledge, and L2 morphological knowledge were the three strongest linguistic correlates of reading comprehension, with metacognition being the smallest one. In addition, the meta-analysis revealed that the mean correlations for L2 language variables (decoding, phonological awareness, orthographic knowledge, and morphological knowledge) were larger than the mean correlations for language-general constructs (working memory and metacognition) or L1 reading comprehension. Thus, by investigating the contribution of various component skills to L2 reading comprehension, Jeon and Yamashita's answer to Alderson's question was that foreign language reading did seem to be a language problem, that is, linguistic skills make more contribution to L2 reading than comprehension skills.

Another issue is about the relationship among component skills. Some component skills do not make direct contributions to reading comprehension. Instead, they make indirect contributions to reading comprehension through the mediation of other component skills. Component skills are not isolates. Instead, they correlate with each other. Research techniques like structural equation modeling make it possible to analyze the direct and indirect effects of

component skills to reading comprehension and the interactions among component skills. SEM use "various types of models to depict relationships among observed variables, with the basic goal of providing a quantitative test of a theoretical model hypothesized by the researcher" (Schumacker & Lomax, 2004, p. 2).

Compared to other statistic tools, the strengths of SEM lie in the following aspects: (a) SEM enables sophisticated phenomenon to be statistically modeled and tested, (b) SEM techniques take measurement error into account in analyzing data, (c) SEM can test a measurement model and structural model at the same time, and (d) SEM can test both direct and indirect effects from factors to the dependent variable. Through SEM, I can test hypothesized model and examine the complex relationship among constructs. Hancock and Schoonen (2015) proposed using SEM in language related research.

Methodologically, the majority of the studies on L2 Chinese reading (e.g., Wu, 2017) and L1 Chinese reading (e.g., Wang, Perfetti, & Liu, 2003; Wang, Yin, & McBride-Chang, 2015; Wu, 2017) based their conclusions purely on a quantitative data collection method. A mixed method approach (MMR) can use both quantitative and qualitative data collection systematically (Brown, 2014). MMR recognizes the strengths and weaknesses of both quantitative and qualitative research methods and "provide the most informative, complete, balanced, and useful research results" (Brown, 2014, p. 8). Thus, this dissertation adopts a mixed method approach and gathers data using quantitative and qualitative methods.

Interview is a major way to collect data on people's views. Semi-structured interviews are commonly used in qualitative research (Roulston, 2010). In semi-structured interview, interviewers prepare an interview guide that includes a number of questions. After posing each question to the interviewee, the interviewer follows up with probes eliciting further details,

explanations, and descriptions. A focus group brings a group of people together to discuss a set of topics introduced by the researcher (Roulston, 2010, p. 35). The strength of focus groups is that they can generate a range of opinions and ideas in a short period of time. This study will collect qualitative data using interviews and focus groups.

My dissertation, therefore, has three aims. First, based on previous research (Jeon & Yamashita, 2014) and characteristics of Chinese, I hypothesize a model with five component skills as exogenous variables and reading comprehension as endogenous variable. The five component skills are semantic radical knowledge, character knowledge, vocabulary knowledge, morphological knowledge, and grammar knowledge. Then, I design twelve tests to measure the five latent component skills and reading comprehension. Most importantly, the direct and indirect contribution of the components skills to reading comprehension, as well as the interrelations among the component skills, are examined using SEM. Second, adopting a discriminant analysis, I identify which component skill could best distinguish a high-skilled reader from a middle-skilled or low-skilled reader. Third, I also explicate L2 Chinese readers' perceptions of reading in Chinese based on interview and focus group data. In particular, I look at what is important in reading in Chinese, what makes reading in Chinese easy or difficult, what their strategies for unknown characters in reading are, and what they have done to improve reading.

By meeting those aims, this dissertation contributes to L2 Chinese reading by identifying important component skills, examining the contribution of the component skills to L2 Chinese reading and the interrelations among component skills, and investigating L2 readers' perceptions of L2 Chinese reading.

1.2 Organization of the Dissertation

The dissertation is organized as follows.

Chapter 2 reviews the literature that are of relevance and importance to this study, including (a) component skills of L1 and L2 English reading, (b) features of Chinese, and (c) component skills of L1 and L2 Chinese reading. The research questions are presented at the end of this chapter. Chapter 3 provides detailed descriptions of the participants, measurement materials, analysis methods and procedures of the two pilot studies and the main study. Chapter 4, organized according to the four research questions, reports the results of the study. Chapter 5 discusses the main findings in light of previous research, explicates the implications of the study, points out the limitations of the study, and suggests avenues for future research.

CHAPTER 2
LITERATURE REVIEW

2.1 Introduction

This chapter first reviews the literature on three component skills that have been found to play primary roles in L1 and L2 English reading comprehension based on Jeon and Yamashita's (2014) meta-analysis. The three component skills are vocabulary knowledge, grammar knowledge, and morphological knowledge. Secondly, this chapter explicates the characteristics of Chinese. Thirdly, based on the component skills of L2 English reading and characteristics of Chinese, the five component skills that might play a primary role in L2 Chinese reading are discussed. Finally, the hypothesized SEM model and the research questions are presented.

2.2 Component Skills of L1 and L2 English Reading Comprehension

L1 and L2 English reading research has examined the contribution of various components to reading comprehension. This section will only review three linguistic high correlates of reading comprehension based on Jeon and Yamashita's (2014) study, which are vocabulary knowledge, morphological knowledge, and grammar knowledge.

2.2.1 Vocabulary knowledge. The association between vocabulary knowledge and reading comprehension has been well established (Grabe, 2009; Perfetti, 2007). Efficient lexical access and high-quality lexical representation have been found to be essential for reading comprehension (Perfetti, 2007). Stanovich (2000) reported strong correlations between reading and vocabulary among third- through seventh-grade L1 students (r = .64 to r = .76).

In L2 settings, Jeon and Yamashita's (2014) meta-analysis reported vocabulary knowledge as one of the strongest correlates of L2 reading comprehension, with a correlation of .79. Droop and Verhoeven (2003) adopted a linear structural equation modeling approach and

established a causal relationship between vocabulary knowledge and reading comprehension among 60 Moroccon and 62 Turkish children.

Shiotsu and Weir (2007) investigated the contribution of vocabulary knowledge to L2 reading comprehension. In one of their experiments, vocabulary knowledge was measured using a vocabulary level test. This test was made up of a number of item clusters. Each cluster contained six word choices (three target words and three distractors), and three definitions of the target words. The participants were asked to match the definitions with the target words. The results showed that vocabulary knowledge and reading comprehension were significantly correlated ($r = .85$, $p < .05$). Vocabulary and grammar knowledge together explained 83% of the variance in reading comprehension, and vocabulary knowledge uniquely explained 4% of reading variance.

Guo and Reohrig (2011) also investigated the contribution of vocabulary knowledge to reading comprehension. They used two measures of vocabulary knowledge (breadth and depth). The breadth of vocabulary knowledge was measured using a vocabulary level test. Words were chosen from 2000, 3000, 5000, 10000 word frequency list, and the university word list. The depth of vocabulary knowledge measure mainly tested two aspects of knowledge: (a) word meaning, particularly polysemy and synonymy, and (b) word collocation. Both the breadth and depth measures had high reliability, with an alpha value of .96 and .97, respectively. The results showed that vocabulary level test and depth of vocabulary knowledge test was significantly correlated with reading comprehension at .43 and .35 respectively.

Vocabulary knowledge is a multidimensional construct (Nation, 2001). The dimensions of lexical knowledge include receptive and productive knowledge, vocabulary size and breadth, word form, meaning, grammatical functions and use. In L2 reading research, measures of

vocabulary knowledge that have been commonly used include measures of vocabulary breadth and depth, as we saw in Guo and Reohrig's (2011) study and Shitotsu and Weir's (2007) study. Breadth of vocabulary essentially refers to the number of words that an individual knows (Guo & Roehrig, 2011). Depth of vocabulary is mainly concerned with how well a word is known. Individual differences in vocabulary breadth and depth have become a potent predictor of L2 reading literacy development.

The relationship between vocabulary and reading comprehension is not one-directional, but reciprocal (Grabe, 2009; Stanovich, 2000). Surely, word knowledge enables readers to comprehend texts. However, words can be learnt incidentally through reading as well (Krashen, 2004; West & Stanovich, 1991). This bidirectional relationship, however, does not obscure the contribution of vocabulary knowledge to reading comprehension (Jeon & Yamashita, 2014).

2.2.2 Grammar knowledge. Grammar knowledge is a well-acknowledged component of reading comprehension. In the literature, the terms grammar knowledge, syntactic knowledge, and syntactic awareness are used. In this dissertation, they are also used interchangeably. Grammar knowledge contributes significantly to learners' performance in word decoding and reading comprehension (e.g., Bentin, Beutsch & Liberman, 1990; Muter, Hulme, Snowling, & Stevenson, 2004; Nation & Snowling, 2004; Plaza & Cohen, 2003; So & Siegel, 1997).

Muter et al. (2004) examined the contribution of grammar knowledge to reading comprehension among 90 L1-British children. They developed a morphological generation test with 24 items to assess grammar knowledge. Each test item included two sentences: a stem sentence followed by a second sentence in which the final word was omitted. The children were required to provide the missing ending, for example, "here is a tree, here are three … [trees]." A word order correction test was also designed. The study found that the correlation between word

order correction and reading comprehension was .61 and the correlation between morphological generation and reading comprehension was .39. Vocabulary knowledge, grammar knowledge, and early word recognition ability accounted for 86% of the variance in reading comprehension. They concluded that vocabulary knowledge and grammar knowledge assumed a similar level of importance. Also, it seems that reading comprehension depends on higher-level language skills such as vocabulary knowledge and grammar knowledge (p. 675).

The significance of grammar knowledge in L2 reading has been investigated in previous research (e.g., Abu-Rabia & Sanitsky, 2010; August, Francis, Hsu, & Snow, 2006; Guo & Roehrig, 2011; Khaldieh, 2001; Lefrancois & Armand, 2003; Nassagi & Geva, 1999; Shiotsu, 2010; Shiotsu & Weir, 2007; Van Gelderen et al., 2004) and its significant role has been established.

Nassaji (2003) investigated the contribution of a number of higher-level and lower-level processing skills to advanced ESL reading comprehension, one of which was syntactic knowledge. To measure syntactic knowledge, a syntactic judgment task was developed. The task consisted of 30 sentences: 15 that were syntactically correct and 15 syntactically incorrect. The task was developed to test a variety of forms of syntactic knowledge such as function words, word order, phrase order, clause boundaries, prenominalization, tense markers, articles, subject-object agreement, particles and copula words. The participants read the sentences at a normal pace and decided whether the sentence was correct or not. The study found that the correlation between syntactic knowledge and reading comprehension was .44.

Jeon and Yamashita's (2014) meta-analysis study showed that the overall correlation between L2 grammar and L2 reading comprehension was strong, r = .85, (95% CI [.58–.95]) and

statistically significant (p = .00) (p.185). This demonstrated that grammar knowledge has a significant effect on L2 reading comprehension.

In reading research on alphabetical languages, grammar knowledge is usually conceptualized as morphosyntactic knowledge, which includes knowledge about tense, aspect, word order, subject-verb agreement, articles, and so on. Grammar knowledge is significant because fully-developed grammatical knowledge will enable readers to integrate syntactic information at the phrase, clause, and sentence levels to achieve comprehension (Jeon & Yamashita, 2014, p. 165).

2.2.3 Morphological knowledge. The knowledge of morphology may contribute to reading ability in two ways. Morphological knowledge and morphological awareness have been used interchangeably in the literature and this dissertation does the same. First, since a large proportion of words have meanings that are predictable from their parts (Nagy & Alderson, 1984), knowledge of morphology is believed to contribute to vocabulary knowledge (Nagy & Anderson, 1984; Nagy, Berninger, & Abbott, 2006; Zhang, Koda, & Leong, 2016). Second, morphological knowledge has been found to make a significant contribution to passage level reading comprehension (e.g., Carlisle, 1995, 2000; Deacon & Kirby, 2004; Katz, 2004; Ku & Anderson, 2003; Mahony, 1994; Nagy, Berninger, & Abbott, 2006; Nagy, Berninger, Abbott, Vaughan, & Vermeulen, 2003; Singson, Mahony, & Mann, 2000). Studies have found that skilled readers are more sensitive to the morphemic structure of a word than less skilled readers (Fowler & Liberman, 1995; Stoltz & Feldman, 1995).

Nagy et al. (2003) investigated the contribution of morphological awareness to word reading, spelling, and reading comprehension measures in 98 second graders and 94 fourth graders. SEM analysis was used to evaluate the contribution of the four predictors of literacy

outcomes. Results showed that for the second graders, morphology contributed uniquely to reading comprehension when other predictors were statistically controlled for. For the fourth graders, morphology was significantly correlated with oral vocabulary (r = .78), phonology (r = .67), and orthography (r = .58).

Nagy et al. (2006) investigated the contribution of morphological awareness to reading comprehension and word reading among 184 fourth and fifth graders, 218 sixth and seventh graders, and 207 eighth and ninth graders. The results showed that morphological awareness was highly correlated with reading vocabulary at all grade levels, with the correlation being highest for the fourth/fifth-grade group (r = .83) and lower for the sixth/seven-grade group (r = .72) and eighth/ninth-grade group (r = .67). Morphological awareness made a significant unique contribution for reading comprehension, reading vocabulary, and spelling at all grade levels. The SEM analyses of relationships among morphological awareness, vocabulary and reading comprehension also showed that much of the contribution of morphological knowledge to reading comprehension occurs through the mediation of the vocabulary knowledge.

Morphological knowledge, though less frequently studied by L2 English reading researchers, is a type of intraword knowledge that is found to have an impact on L2 reading comprehension (Droop & Verhoeven, 2003; Jeon, 2011; Jeon & Yamashita, 2014; Zhang & Koda, 2012). Jeon and Yamashita's (2014) meta-analysis showed that the correlation between morphological knowledge and L2 reading comprehension is strong at .61.

In a longitudinal study, Droop and Verhoeven (2003) followed 143 Dutch, 62 Turkish, and 60 Moroccan children from the beginning of Grade 3 to the end of Grade 4. The children were assessed on multiple reading related variables in time. Morphology was operationalized as morphological awareness of inflectional morphology and was assessed using a sentence

completion task. The results showed that morphological knowledge maintained a strong correlation with vocabulary knowledge (grade 3, $r = .80$, and grade 4, $r = .83$) and with reading comprehension (grade 3, $r = .86$, and grade 4, $r = .99$).

Jeon (2011) investigated the contribution of L2 morphological awareness to L2 reading comprehension among 188 tenth graders at a South Korean high school. Morphological knowledge was assessed using two tests: a test of morphological structure and a test of verbal suffix knowledge. The results showed that the test of morphological structure and reading comprehension was significantly correlated at .481 ($p < .01$). The verbal suffix knowledge test and the reading comprehension were also significantly correlated at .381 ($p < .01$). In addition, morphological awareness was a significant predictor of L2 reading comprehension when other variables were controlled for.

Based on the above discussion, we can see that vocabulary knowledge, grammar knowledge, and morphological knowledge are all component skills that contribute to reading comprehension. A good knowledge of a language's vocabulary, grammar and morphological knowledge is essential in learning to read. However, the above-reviewed studies were all on reading in alphabetical languages like English. Since Chinese and English have different writing systems, two key questions remain. First, to what extent do those component skills contribute to Chinese reading? Second, what other component skills might contribute to reading in Chinese? The next section of this chapter will provide a discussion of the relevant linguistic features of Chinese, which will be followed by a review of the literature on reading in Chinese.

2.3 Features of Chinese

Chinese has traditionally been referred to as a logographic or morphosyllabic writing system (Wang et al., 2003). The basic graphic form in Chinese is the character. Unlike in

alphabetic languages like English, each Chinese character does not correspond to an individual phoneme. Instead, a character maps onto a syllable and has meaning. Each Chinese character is composed of basic strokes, which are the smallest building blocks of characters. Strokes are combined to form radicals, the basic components of Chinese characters.

Chinese and English also differ at the morphological level. Chinese lacks both derivational and inflectional morphemes. In contrast to the way words are formed in English, compounding is the main way of forming words in Chinese. Grammatically, Chinese is an SVO language and has a much more flexible word order than English.

2.3.1 Radicals and characters. Radicals are the meaningful orthographic components of characters. Chinese characters are grouped together based on radicals. The term radical can be translated as *bushou* (部首, bùshǒu) or *bujian* (部件, bùjiàn) in Chinese. *Bushou* is a relatively restricted definition referring a specific set of stroke patterns that are used to look up characters in dictionaries. *Bujian*, on the other hand, is a relatively broad definition referring to all the stroke patterns that function as constituent components of Chinese characters (Mo, 2013). Some radicals contain two or more *bujian*. In this dissertation, I will adopt the narrow *bushou* meaning of the radical.

Radicals can be further divided into semantic and phonetic radicals (Li & Chen, 1997; Mo, 2013; Taft & Zhu, 1997; Zhou & Marslen-Wilson, 1999). Semantic radicals denote the semantic category of the characters in which they occur, whereas phonetic radicals provide clues about the pronunciation of the character.

As for the extent to which phonetic and semantic radicals can provide clues for pronunciation and meaning, Li, Kang, Wei, and Zhang (1992) showed that in 56% of semantic-phonetic compound characters, the phonetic radical could relatively faithfully represent the

sound of the compound characters. Like phonetic radicals, not all the semantic radicals can fully represent the meaning of the compound characters and a semantic radical does not always provide a reliable guide to meaning. However, 86.72 % of semantic radicals in the most commonly used 5000 characters can provide meaning cues for the compound characters (Li et al., 1992). Those semantic radicals usually suggest a general category of the meaning of the compound character.

Li et al. (1992) analyzed the semantic radicals used in 7000 commonly used Chinese characters and found that not all of the semantic radicals have a high frequency of use. Around two-fifths of semantic radicals only occurred once. Only one-fifth of semantic radicals occurred 20 times or more. Li et al. (1992) summarized the twenty most frequently used semantic radicals. The following is a list of those semantic radicals and the frequency of their occurrence in 7000 commonly used characters. From Table 2.1 we can see that 378 characters out of 7000 commonly used characters share the semantic radical 氵 (water), and 275 characters share the same semantic radical 口 (mouth).

Table 2. 1. Most Commonly Used Semantic Radicals in Chinese

Semantic radicals	Meaning	Frequency	Semantic radicals	Meaning	Frequency	Semantic radical	Meaning	Frequency
氵	Water	378	艹	Grass	304	口	Mouth	275
扌	Hand	261	木	Wood	256	钅	Medal	216
亻	People	192	月	Moon	136	糸	Silk	135
忄	Heart	125	女	Women	112	竹	Bamboo	102
足	Feet	96	石	Stone	96	虫	Worm	142
讠	Speech	138	土	Soil	137	王	King	92
疒	Sick	91	辶	Walk	91			

An integral character is composed of one radical. A compound character, on the other hand, is composed of two or more radicals. According to the *Dictionary of Chinese Character*

Information, about 96% of commonly used characters are compound characters. According to Li et al. (1992), among 7000 commonly used Chinese characters, 80% of them are semantic-phonetic compound characters (形声字, xíngshēngzì).

As for the structure of semantic-phonetic compound characters, left-right and top-down structures are the two major types. The majority of semantic-phonetic radicals (67.39%) have semantic radicals on the left and phonetic radicals on the right. Only 6.46% of them have phonetic radicals on the left and semantic radicals on the right. Around 10.50% of compound characters have semantic radicals at the top and phonetic radicals at the bottom in a vertical arrangement and 7% of them have phonetic radicals at the top and semantic radicals at the bottom (Li et al., 1992).

Most semantic radicals are integral characters, or ones that can also be used independently as characters. For example, in 虾 (xiā, shrimp), the semantic radical 虫 meaning "insect" provides a clue about the meaning of the whole character, suggesting that this character is referring to a kind of insect.下(xià) is the phonetic radical providing cues for the character's pronunciation. Actually, the only difference between pronunciations of 下(xià) and 虾 (xiā) is in the tones. Both 虫 and 下 are also integral characters that can be used independently. As independent characters, 虫 (chóng) means "insect", and下(xià) means "down".

Even though some radicals are independent characters, some other semantic radicals can no longer serve as independent characters in modern Chinese. For example, the radical "艹" (grass) can no longer be used as an independent character. Moreover, some radicals differ in format when they are used as independent characters and as semantic radicals. In some cases, the two formats differ significantly (e.g., 水 and 氵: water; 人 and 亻: people; 刀 and 刂: knife). In

some other cases, the independent character is compressed when it is used as a radical (e.g., 牛 and 牜 : cow; 金 and 釒 : metal).

2.3.2 Morphemes and vocabulary. Morphologically, Chinese employs compounding as a productive method of word formation (Plag, 2003; Sun, 2006; Zhang & Koda, 2013) and has very limited inflectional and derivational affixes, resulting in only a small number of affixed words in the language (Li & Thompson, 1989; Sun, 2006). Moreover, many morphological markers are non-existent in Chinese. Chinese does not mark tense or parts of speech morphologically.

Chinese derivational affixes are bound morphemes that are attached to free or bound roots to form new words. Chinese does not have many derivational affixes. The most commonly used prefixes are 老– (lǎo , old), 小 – (xiǎo, small), 初 – (chū, beginning), 第 – (dì, ordinal number), and 可 – (kě, -able). Table 2.2 provides a summary of the commonly used derivational prefixes in Chinese.

Table 2. 2. Commonly Used Chinese Derivational Prefixes

Derivational affixes	Pinyin	Meaning	Example Word	Pinyin	Morpheme-Morpheme	Word Meaning
老	lǎo	seniority familiarity	老外	lǎowài	old-foreigners	foreigners
小	xiǎo	Small	小说	xiǎoshuō	small-speak	Novel
初	chū	Beginning	初中	chūzhōng	beginning-middle	middle school
第	dì	ordinal number	第一	dìyī	ordinal number-one	First
可	kě	-able	可爱	kěài	able-love	lovable

老– and 小 – are placed in front of a person's family name to indicate a sense of familiarity (Li & Thompson, 1989; Sun, 2006). 老– can also precede a number ranging from two

to ten to indicate seniority. 初 – as a prefix can mark the first ten days of the first month in the Chinese lunar calendar. 第 – is used in front of a number to mark an ordinal number in Chinese. 可 – is another prefix in modern Chinese that precedes another morpheme to form a adjective.

The most common derivational suffixes include –子(zǐ, child), – 学 (xué, study), – 度 (dù, degree), – 化 (huà, change), – 员 (yuán, -er), and – 头(tóu, head). 子 is attached to a free or bound root but with no consistent meaning. 学 indicates an academic discipline. 度 is related to a degree measure. 化 denotes a change, and 员 specifies a person with a certain duty. 头 as a integral character means "head", but has no consistent meaning as a suffix. Table 2.3 lists the most common derivational suffixes.

Table 2. 3. Commonly Used Chinese Derivational Suffixes

Derivational affixes	Piyin	Meaning	Example word	Pinyin	Morpheme-morpheme	Word Meaning
子	zǐ	child	兔子	tùzi	rabbit-child	rabbit
学	xué	study;-logy	数学	shùxué	math-study	Mathematics
度	dù	degree	速度	sùdù	fast-degree	Speed
化	huà	change	现代化	xiàndàihuà	mordern-change	modernization
员	yuán	-er	服务员	fúwùyuán	service-er	waiter/waitress
头	tóu	head	甜头	tiántou	sweet-head	Benefit

Inflectional morphemes are usually attached to free morphemes and usually don't change the grammatical category of the stem. The most common inflectional suffixes in Chinese include the plural marker 们 (men), perfective aspect marker了 (le), experiential marker 过 (guò) and the imperfective marker 着 (zhe).

Compounding is the main method of forming words in Chinese. Monosyllabic words dominated in ancient written Chinese. According to Sun (2006), the overwhelming majority of old Chinese morphemes were monosyllabic. That is, a character was a word. However, in the last

two millennia or so, new coinages have been mainly disyllabic and multi-syllabic. The majority of monosyllabic words in Old Chinese need to be expressed using disyllabic forms in modern Chinese. This compounding process allows two or even three morphemes (characters) to form a compound word (Sun, 2006). Disyllabic (two-character/two-morpheme) words compose 74% of the total corpus of commonly used words, according to the *Modern Chinese Frequency Dictionary* (cf. Shen & Ke, 2007).

Some disyllabic words are composed of two free morphemes. For example, in 雪山 (xuě shān, snow-mountain = snow-covered mountain), both 雪(xuě , snow) and 山(shān, mountain) are fully-fledged words. In some disyllabic words, both formants are bound roots. For example, in 善良 (shànliáng, kind-kind = kind), 善 and 良 are two bound morphemes. One of the two formants can be a free morpheme and another can be a bound as well in modern Chinese. For example, in 购买 (gòumǎi, purchase-buy = to buy), 购 is a bound morpheme and 买 is a free morpheme. In 帮助 (bāngzhù, help-assist = help), the first formant 帮 is free and the second formant 助 is a bound morpheme.

As for the structure of the components of disyllabic words, the head of a nominal is on the right-hand side of a disyllabic compound and the head of a verb is on the left-hand side (Sun, 2006, p. 50). Packard (2000, p. 127) found that nearly 90% of Chinese compound nouns have a nominal formant on the right and 85% of compound verbs have a verbal formant on the left. This feature corresponds to the syntactic structure of Chinese. That is, the head of a noun phrase is on the right and the head of a verb phrase is on the left.

As for the relationship between the morphemes in a disyllabic word, two morphemes form a quasi-syntactic relationship with each other, which makes it possible to analyze the internal composition of a Chinese word in syntactic terms (Yip, 2000). Selkirk (1982) states, “I

will argue that word structure has the same general formal properties as syntactic structure and moreover, that it is generated by the same sort of rule system" (p. 2).

There are five types of syntactic structures commonly found in Chinese disyllabic words: juxtapositional, modificational, governmental, predicational, and complemental (Yip, 2000). Table 2.4 provides examples for each compound structure. Juxtaposition means combining two morphemes of similar semantic orientation and syntactic category to form a disyllabic word where the two morphemes constitute a parallel relationship (Yip, 2000). The two morphemes can be free morphemes or bound morphemes or one of them can be free and the other can be bound. In the two examples in Table 2.4, two morphemes in 潮湿 (cháoshī, damp-wet = moist) are adjectives and in 驱逐 (qūzhú, drive-chase = expel) are verbs. The meanings of the compound words are closely related to the morphemes in each compound.

The second type is the modificational type. In this type of words, one morpheme is a modifier, and the other one is the modified element. For example, in the following list of words: 微笑(wēixiào, gentle-smile = smile)，奸笑(jiānxiào, grin-smile = grin), 狞笑(níngxiào, hideous-smile = grin hideously), 嘲笑(cháoxiào, mock-smile = mock), 讥笑(jīxiào, deride-smile = deride), the first morpheme is the modifier, which modifies the second morpheme 笑(smile). The modified element can be related to function, manner, purpose, taste, location, color, and so on.

Words of the governmental type "follow the syntactic pattern of either 'verb+object' or 'preposition+object'" (Yip, 2000, p. 135). For example, in 唱歌(chànggē, sing-songs = to sing songs), 唱 (chàng, sing) is the verb and 歌 (gē, songs) is the object.

A word of the predicational type is a compound in which the first element is a nominal indicating the subject and the second element a verb or adjective serving as its predicate. For example, in 地震 (dìzhèn, earth-shake = earthquake), 地 (dì, earth) is the subject and 震(zhèn,

shake) is the verb serving as the predicate.

The fifth type of word is called the complemental type. The first morpheme is usually a verb, and the second morpheme is either a verb or an adjective complementing the meaning of the verb. According to Yip (2000), it is "the structurally most constructive type of disyllabic verb in the lexicon" (p. 168). As for the types of complement, most of the complements belong to two types: (a) directional marker and (b) resultative marker.

Table 2. 4. Five Compound Structures in Chinese

Compoun structures	Example 1	Example 2
Juxtapositional	潮湿 cháoshī, damp-wet = moist	驱逐 qūzhú, drive-chase = expel
Mordificational	微笑 wēixiào, gentle-smile = smile	奸笑 jiānxiào, grin-smile = grin
Governmental	唱歌 chànggē, sing-songs = to sing songs	撒谎 sāhuǎng, tell-lies = to tell a lie
Predicational	地震 dìzhèn, earth-shake = earthquake	头疼 tóuténg, head-hurt = headache
Complemental	回来 huílái, return-towards = to come back	听懂 tīngdǒng, listen-understand = understand

To summarize the relationship among radicals, characters, morphemes, and words, Chinese characters are the basic unit of Chinese script. Radicals are the meaningful components of characters. There are two types of radicals, semantic and phonetica radicals. Semantic radical provide meaning cues for a character and phonetic radical provides sound cues for a character. The majority of Chinese words are formed by combining two characters. Characters are called morphemes if they are used to form a word. A morpheme can be free or bound.

2.3.3 Grammar. Chinese is a topic-prominent language (Li & Thompson, 1989), which differs from a subject-prominent language like English. The topic is what the sentence is about. It always comes first in the sentence, and it refers to something the speaker assumes the listener has some knowledge about. The topic and subject can co-occur in a sentence. In Chinese, the subject can also be omitted in certain situations. The subject is not marked by position, by agreement or by any case marker (p. 16).

Chinese, like English, is a language with the basic word order of subject-verb-object (SVO) (Sun, 1996). Word order is a critical syntactic device that constrains the grammatical relationships of constituents in a Chinese sentence (Chik et al., 2012). Changes in word order in a sentence may cause a change in the meaning of the sentence or render the sentence unreadable. In Chinese, it is semantic factors, not grammatical ones, that determine the order of the major constituents with respect to the verb (Li & Thompson, 1989). Thus, based on the meaning, the word order is flexible in certain situations and conveys different meanings. It should be noted that Chinese word order is flexible, but not free. The flexibility of words occurring at the beginning, middle or end of the sentence is subject to syntactic constraints.

Knowledge of Chinese grammar includes an understanding of the grammatical features of the language and the ability to use this knowledge to identify errors. To be more specific, a good grasp of Chinese syntactic knowledge includes understanding that (a) the basic word order of Chinese is SVO, (b) Chinese has a flexible word order, yet the word order is constrained by syntactic rules, (c) Chinese is a topic-prominent language, and (d) the usage of Chinese prepositions, adverbials, classifiers, serial verb constructions, questions, negations, aspect markers, copulas, and so on.

Based on the previous discussion, we can see that in terms of radicals, Chinese semantic radicals provide clues for the meaning of characters. Thus, knowledge of semantic radicals may make contribution to Chinese character recognition, and in turn, to passage-level reading comprehension. Morphologically, Chinese disyllabic words are mainly formed through compounding. The two morphemes in disyllabic words have a quasi-syntactic relationship. With knowledge of the meaning of two morphemes, and of the inner-structure between morphemes, readers may easily understand or guess the meaning of Chinese disyllabic words, which may

facilitate reading in Chinese. Grammatically, a good knowledge of Chinese word order, conjunctions, prepositions, adverbials, questions, negations, aspect markers, copulas, and so on can enable readers to integrate characters and words into meaningful chunks and decipher meaning as they read. Researchers in L1 Chinese reading have examined the roles of radicals, characters, vocabulary, morphemes, and grammar knowledge in reading comprehension.

2.4 Components of L1 and L2 Chinese Reading

Drawing on research of L1 and L2 reading in alphabetical languages, researchers have investigated the components that contribute to Chinese reading. The components that have been studied in L1 Chinese reading include radical knowledge (e.g., Wang et al., 2015; Li, Peng, & Shu, 2006), character recognition (e.g., McBride-Chang, Shu, Zhou, Wat, & Wagneret, 2003; Song et al., 2015), vocabulary knowledge (e.g., McBride-Chang et al., 2003; Song et al., 2015; Tong, Tong, Shu, Chan, & McBride-Chang, 2014), and grammar knowledge (Chik et al., 2012; So & Siegel, 1997, Yeung, Ho, Chan, Chung, & Wong, 2013).

2.4.1 Radical knowledge. The research on the role of radical knowledge has mainly focused on its contribution to Chinese character recognition (e.g., McBride-Chang & Ho, 2005; Siok & Fletcher, 2001; Wang et al., 2015).

Taft and Zhu (1997) found the existence of radical-level processing in character recognition. The frequency of a radical and its position in a specific character could affect the speed and accuracy of character recognition (Feldman & Siok, 1999; Zhou & Marslen-Wilson, 1999). Studies have also shown that participants recognized characters containing higher frequency radicals faster than those containing lower frequency radicals (Li & Chen, 1997). The above studies provided strong evidence that knowledge of radicals, their functions, and their positions plays an important role in character recognition.

Even though phonetic and semantic radicals are both components of Chinese characters, studies have shown that phonetic radical knowledge does not contribute much to character recognition (Li, Shu, McBride-Chang, Liu, & Peng, 2012; McBride-Chang et al., 2003; Pan et al., 2011; Tong, 2008; Tong, McBride-Chang, Shu, & Wong, 2009). Phonological knowledge was found not to be uniquely associated with character recognition conceptualized as word reading among 536 kindergartners, second graders and fifth graders in Hong Kong (Tong, 2008). On the other hand, semantic radical knowledge has been found to have a significant effect on Chinese character recognition (Wang et al., 2015).

In a one-year longitudinal study, Wang et al. (2015) investigated the correlates of Chinese character recognition (conceptualized as single-character word reading) among Chinese kindergartners. They found that semantic radical knowledge (measured by a semantic radical-picture matching test) was a significant and longitudinal predictor of character recognition. The results revealed that semantic radical awareness explained 15% of the unique variance in Chinese character reading. One year later (Time Two), semantic radical awareness contributed only 3% to the unique variance in character reading with age, IQ, and Time One reading skill statistically controlled.

A few studies (e.g., Shen, 2000; Shen & Ke, 2007; Su, 2010) have examined the role of radical awareness in L2 Chinese character recognition. In general, these studies have shown that radical knowledge increases with years of language learning and that advanced learners have a higher level of radical knowledge than beginning learners (Shen & Ke, 2007; Su, 2010). Su (2010) found a much stronger correlation between radical knowledge and word recognition ($r = .84$, $p < .01$).

To conclude, radical knowledge, especially semantic radical knowledge, has been found

to contribute to character recognition. The semantic knowledge provides information about a character's meaning by giving clues to the semantic category a character belongs to. Meanwhile, a large number of Chinese characters share the same semantic radicals and are related in meaning. Learners may learn new characters with more ease if they have already learned characters with the same semantic radical. Lastly, possessing a good knowledge of high frequency semantic radicals will enable learners to recognize characters more efficiently.

2.4.2 Character recognition. It is interesting to note that most of the existing studies on character recognition have investigated character recognition as a dependent variable, not a contributor of L1 Chinese reading comprehension. Previous research focused on what contributes to Chinese character recognition (McBride-Chang et al., 2003; Tong, 2008; Tong et al., 2009). One study examined character recognition as a contributor to L1 reading comprehension.

In Song et al.'s (2015) longitudinal study, character recognition was measured using a character-reading task. Children were asked to read 150 characters. The study found that age 11 character reading was significantly correlated with age 11 reading comprehension ($r = .587$, $p < .01$).

Like word recognition, automatic and efficient character recognition may contribute to L1 and L2 Chinese reading comprehension. Even though the link between word recognition and reading comprehension has been established in L1 and L2 English reading (Grabe, 2009), the relationship between character recognition and L2 Chinese reading has not been investigated.

2.4.3 Morphological awareness. There are only a few empirical studies examining the relationship between morphological awareness and character recognition (McBride-Chang et al., 2003; Liu & McBride-Chang, 2010), vocabulary knowledge (Ku & Anderson, 2003), and

reading comprehension (Li, Alderson, Nagy, & Zhang, 2002; Ku & Anderson, 2003; Wang, Cheng, & Chen, 2006) in L1 Chinese.

Ku and Anderson (2003) investigated whether morphological awareness contributed to vocabulary acquisition and reading proficiency in Chinese children. The participants were 416 Taiwanese second, fourth, and sixth grade students. The results showed that all four measures of morphological awareness (the recognize morphemes test, discriminate morphemes test, select interpretations test, and judge pseudowords test) were significantly correlated with vocabulary knowledge. Morphological knowledge was also significantly correlated with reading comprehension among Chinese children. A hierarchical regression analysis showed that morphological awareness contributed an additional 32% and 25% of the variance after vocabulary knowledge. Yet, Wang, Cheng, and Chen (2006) did not report the contribution of Chinese morphological awareness (measured by compound structure task, derivational morphology task, and homophone identification task) to Chinese character reading and reading comprehension. Thus, no consenus has been reached regarding the contribution of morphological knowledge to L1 Chinese reading comprehension.

It is worth noting that only one study (Wu, 2017) examined the role of morphological knowledge on L2 Chinese reading. The study found that morphological knowledge did not have a direct effect on reading comprehension, but an indirect effect through the mediation of vocabulary knowledge. The task used in the study to measure morphological knowledge was a production task.

Consequently, the following questions remain: (a) what is the relationship between morphological knowledge, especially compound structure knowledge, and vocabulary knowledge?, (b) what is the relationship between morphological knowledge and reading

comprehension?, and (c) what is the interaction among morphological knowledge, vocabulary knowledge and reading comprehension?

Since Jeon and Yamashita's meta-analysis (2014) showed that the correlation between morphological knowledge and L2 reading comprehension is strong at .61, future research in L2 Chinese reading can investigate the role of morphological knowlege in L2 Chinese reading.

2.4.4 Vocabulary knowledge. A few studies have examined the role of vocabulary knowledge in L1 Chinese reading comprehension (McBride-Chang et al., 2003; Tong et al., 2014; Song et al., 2015). Tong et al.'s (2014) longitudinal study measured vocabulary knowledge through a definition task, and reading comprehension through multiple-choice questions. The results showed that vocabulary definition was positively correlated with reading comprehension at age 10 ($r = .42$, $p < .001$) and age 11($r = .38$, $p < .001$). In an eight-year longitudinal study, Song et al. (2015) investigated the growth of vocabulary knowledge and its contribution to reading comprehension among 264 Chinese children. Vocabulary knowledge was measured using a definition test and reading comprehension by multiple-choice questions. The study found that both vocabulary slope and vocabulary intercept at age four and ten uniquely explained variation in reading comprehension.

The contribution of vocabulary knowledge to L2 English reading comprehension and L1 Chinese reading has been well established (Jeon & Yamashita, 2014). However, such a relationship has not been built in L2 Chinese reading.

2.4.5 Grammar knowledge. Research on the role of grammar knowledge in L2 Chinese reading has been surprisingly scarce. There have only been a few studies focusing on the correlation between syntactic knowledge and word reading and sentence-level reading comprehension in L1 Chinese reading (e.g., Chik et al., 2012; So & Siegel, 1997; Yeung et al.,

2013). Only one study has examined the role of grammar knowledge in discourse-level reading comprehension in L1 Chinese (Tong et al., 2014).

Tong et al. (2014) investigated the role of syntactic awareness in discourse-level reading comprehension in Chinese children. They developed two tasks to measure syntactic awareness: a grammatical judgment/correction task and a conjunction cloze task. The study found that the conjunction cloze task was moderately correlated with previous and concurrent years' discourse-level reading comprehension (r = .53 and .56, respectively). The grammatical judgment/correction task was also significantly correlated with previous and concurrent years' reading comprehension at a modest level (r = .19 and .18, respectively). The syntactic tasks together explained a small portion (2.3%) of the total variance of reading comprehension. They concluded that children's syntactic knowledge, especially in the use of conjunction words, appeared to be uniquely linked to discourse-level reading comprehension.

I was not able to find any published studies that investigated the role of syntactic knowledge in L2 Chinese reading.

To conclude, the majority of research on Chinese reading has been conducted with L1 native children. However, little is known about L2 Chinese reading. Specifically, we are unclear about the following relationships. First, we know that radical knowledge contributes to character recognition. However, little is known about the relationship among semantic radical knowledge, character recognition, and reading comprehension. Meanwhile, from L1 Chinese reading research, we know that morphological knowledge contributes to vocabulary knowledge; however, little is known about the relationship among morphological knowledge, vocabulary knowledge, and reading comprehension. Lastly, little is known about the role of grammar knowledge in L2 Chinese reading.

2.5 The Purpose of Present Study

Since little is known about what component skills contribute to L2 Chinese reading comprehension and how those components interact with each other, this study hypothesized a model of L2 Chinese reading and its component skills (semantic radical knowledge, character knowledge, vocabulary knowledge, morphological knowledge, and grammar knowledge) in L2 Chinese reading and tested the model. Three component skills (vocabulary knowledge, grammar knowledge and morphological knowledge) were included in the model because they were the three strongest linguistic component skills in L2 English reading (Jeon & Yamashita, 2014). Semantic radical knowledge and Character knowledge were included based on linguistic features of Chinese and L1 Chinese reading research.

Semantic radical knowledge is hypothesized to have a direct effect on character recognition, a direct effect on reading comprehension, and an indirect effect on reading comprehension through the mediation of character knowledge. Morphological knowledge is hypothesized to have a direct effect on vocabulary knowledge, a direct effect on reading comprehension, and an indirect effect on reading comprehension though the mediation of vocabulary knowledge. Grammar knowledge is hypothesized to have a direct effect on reading comprehension.

In this model, radical knowledge will be measured using two tests, receptive semantic knowledge test (RSRKT) and semantic radical meaning matching test (SRMMT). Character recognition will be measured by two tests, lexical decision test (LDT) and character knowledge test (CKT). Two tests will be designed to measure vocabulary knowledge: receptive vocabulary knowledge test (RVKT) and vocabulary synonym test (VST). Two aspects of morphological knowledge will be measured using a morpheme discrimination test (MDT) and a compound

structure discrimination test (CSDT). Grammar knowledge will be operationalized using two tests: a word order test (WOT) and a grammaticality judgment test (GJT). Reading comprehension will be measured using a multiple-choice test (MCT) and a cloze test (CT). Figure 2.1 presents the hypothesized model.

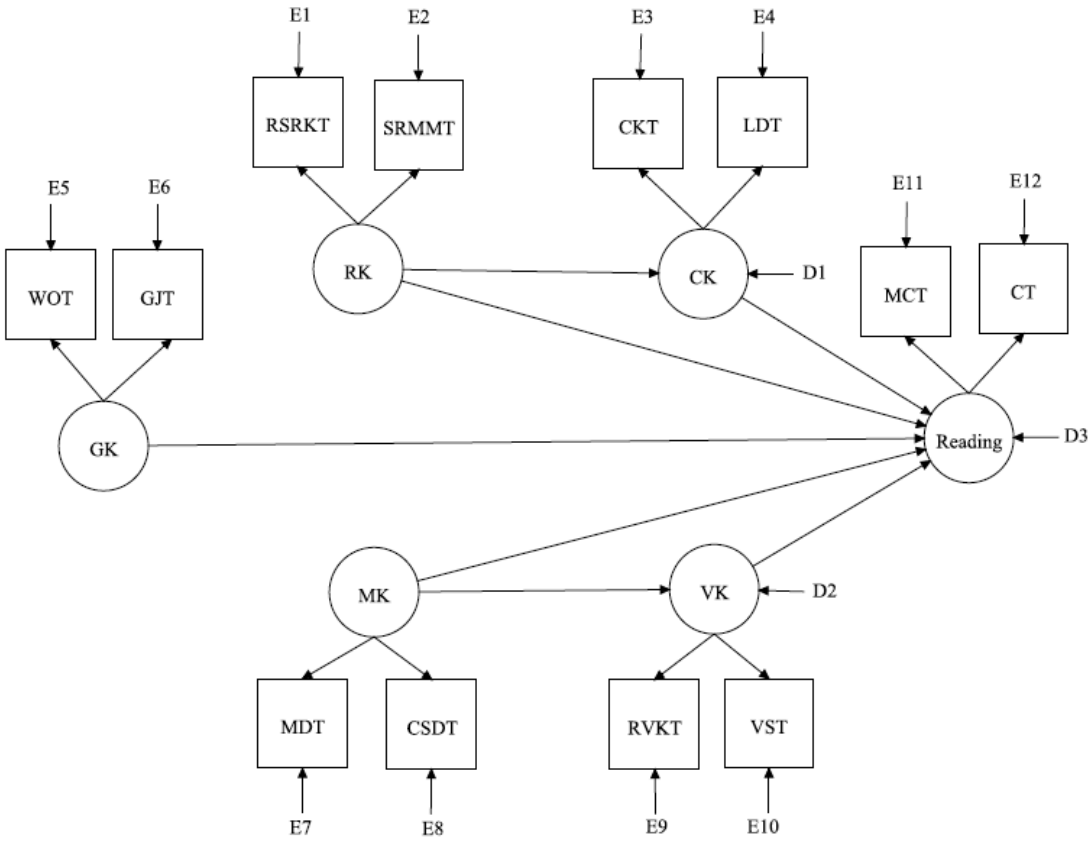


Figure 2. 1. A Hypothesized Model of L2 Chinese Reading Comprehension

Note: RK: radical knowledge; CK: character knowledge; MK: morphological knowledge; VK: vocabulary knowledge; GK: grammar knowledge. RSRKT = receptive semantic radical knowledge test; SRMMT = semantic radical meaning matching test; LDT = lexical decision test; CKT = character knowledge test; RVKT = receptive vocabulary knowledge test; VST = vocabulary synonym test; MDT = morpheme discrimination test; CSDT = compound structure discrimination test; WOT = word order test; GJT = grammaticality judgment test; MCQ = multiple choice test; CT = cloze test.

2.6 Research Questions

The following research questions will be addressed in this study.

1. What are the relationships among radical knowledge, character recognition, vocabulary knowledge, morphological knowledge, grammar knowledge, and L2 Chinese reading comprehension?

a). What is the relationship among radical knowledge, character recognition and L2 Chinese reading comprehension?

b). What is the relationship among morphological knowledge, vocabulary knowledge, and L2 Chinese reading comprehension?

c). What is the relationship between grammar knowledge and L2 Chinese reading comprehension?

2. Which component skill can best distinguish high-skilled, middle-skilled and less-skilled readers in L2 Chinese reading?

3. Based on the interview and focus group data, what do studens report about L2 Chinese in terms of the important components of Chinese reading, the difficulty level of Chinese reading, the strategies for unknown characters, and the approaches to improve Chinese reading?

4. To what extent do the quantitative data and qualitative data converge or diverge with regard to the main findings of the study? How and why?

CHAPTER 3
METHODOLOGY

3.1 Introduction

In this chapter, I first introduce measurement instruments of this dissertation, including background information questionnaire, twelve tests, and interview and focus group questions. Then I describe the research procedures, followed by the pilot study one and pilot study two. Finally, I introduce the main study, including detailed information about the participants of the main study, the data cleaning procedures, and the data analysis for the main study.

3.2 Measurement Instruments

Three main instruments were used: a background information survey; a test battery with twelve tests designed to measure the semantic radical knowledge, character knowledge, vocabulary knowledge, morphological knowledge, grammar knowledge and reading comprehension; and semi-structured interview questions.

3.2.1 Background information questionnaire. The questions on the questionnaire can be classified into three categories: (a) background information like gender, age, native language, birth place, heritage learner or not, (b) Chinese experience, including questions like how long they have learnt Chinese and how many hours they spend each day on reading Chinese, and (c) their self-rated language proficiency levels in listening, speaking, reading, and writing. Please see Appendix A for the background information questionnaire in English, Chinese, Russian, and Arabic.

3.2.2 Test batteries. Altogether twelve tests were designed to measure six latent constructs including semantic radical knowledge, character recognition, vocabulary knowledge, morphological knowledge, grammar knowledge, and reading comprehension. Semantic radical

knowledge is measured using two tests: receptive semantic radical knowledge test and semantic radical meaning matching test. Character recognition was measured by a lexical decision test and a character knowledge test. Morphological knowledge was measured using two tests: a morpheme discrimination test and a compound structure discrimination test. Two tests were designed to measure vocabulary knowledge: a receptive vocabulary knowledge test and a vocabulary synonym test. Grammar knowledge was measured using two tests, a word order test and a grammaticality judgment test. Reading comprehension was measured by a multiple-choice test and a cloze test.

Receptive semantic radical knowledge test. Based on Shen and Ke (2007), this test is designed to measure learners' receptive knowledge of semantic radicals. Learners were provided with 20 semantic radicals and asked to write down the meaning of the radicals in English, Russian, or Arabic. The 20 radicals are chosen from the top 20 most frequently used semantic radicals (Li et al., 1992). Each correct answer was credited with one point. The total score of this test was 20.

Semantic radical meaning matching test. This test (based on Shen & Ke, 2007; Su, 2010) includes 20 sets of pseudo-characters with 20 meanings. Pseudo-characters are used to rule out the possibility that participants may have known some unfamiliar characters and thus would not infer the meaning of the character using semantic radical knowledge. The participants were asked to circle the target character that best fits the meaning provided in English, Russian, or Arabic. An example item is listed below. For the English meaning "to mix," there are three pseudo-characters. All of them share the same phonetic radical 月, but different semantic radicals. The combination of the three semantic radicals and the phonetic radical do not result in real Chinese characters. Since "to mix" is related to "hand", and the semantic radical "扌"

means “hands”. The correct answer is 拐 The semantic radical “亻” means “people”, and “纟” means “silk”. Each correct answer was credited with one point and the total score of this test was 20.

Example item: *Below you will see some unfamiliar characters. Please use your radical knowledge to figure out the character that matches the meaning given to the left and circle it.*

Meaning	Characters
1. To mix	伢　　拐　　绢

Lexical decision test. A lexical decision test was designed to measure learners’ Chinese character recognition. The test is composed of 30 characters and nine non-characters. Thirty real characters were chosen from character frequency list in *The Graded Chinese Syllables, Characters, and Words for the Application of Teaching Chinese to the Speakers of Other Languages* (Liu & Ma, 2010). Ten characters were chosen from beginning, intermediate, and advanced level character lists respectively. Non-characters are either composed of radicals that do not exist in Chinese or do not follow positional regularity. Participants were asked to decide whether a graphic form was a character or non-character.

In the following example item, 福 is a real Chinese character. 雉 is a non-character because the radical on the left side always occurs in the right position in real Chinese characters. 疔 is also a non-character since “T” is a non-existent Chinese radical. Thus, participants need to utilize Chinese character orthographical organization knowledge and radical knowledge to make decisions.

Example item: *please decide whether the following are characters or non-characters*

Yes/No	Yes/No	Yes/No

福	雉	疔

When the particiants correctly identified a real character as a real character and a non-character as a non-character, they were credited with one point. The total score of this test was 39.

Character knowledge test. A character knowledge test was designed to measure learners' receptive knowledge of Chinese characters. The test is composed of 30 real characters, nine pseudo-characters, and six easy character fillers, altogether 45 items. Another 30 Chinese characters different from those used in the lexical decision test were randomly chosen from the character frequency list in *The Graded Chinese Syllables, Characters, and Words for the Application of Teaching Chinese to the Speakers of Other Languages* (Liu & Ma, 2010). Ten characters were chosen from beginning, intermediate, and advanced level character lists, respectively.

In order to control for guessing, nine pseudo-characters were created. If the participants say that they know a pseudo-character, then they are overestimating their vocabulary size. Six easy characters were added as fillers. The participants were asked to put "Yes" after a character they knew and a "No" after those they did not. Each correct answer was credited with one point and the total score of this test was 30.

In the following example item, 爱(love), 丑(ugly), and 癌 (cancer) were selected from beginning, intermediate, and advanced character frequency lists, and 伱 is a pseudo-character.

Example item: *Please decide whether you know the following characters.*

Yes/No	Yes/No	Yes/No	Yes/No
爱	丑	癌	伱

Morpheme discrimination test. This test was based on Ku and Anderson (2003) and Zhang et al. (2016). It is designed to determine whether participants understand that a same morpheme may have different meanings in different complex words. Three disyllabic words are presented, for example, among the words 手套 (glove), 手工 (handwork), and 手续 (procedure)，the 手 (hand) in 手续 (procedure) does not imply the meaning "hand". The participants were instructed to circle the word whose morpheme conveys a different meaning. There are 20 items in this test. Each correct answer was credited with one point and the total score of the test was 20.

Compound structure discrimination test. This test was designed to investigate participants' ability to distinguish compound structures. Five types of syntactic structures commonly found in Chinese disyllabic words were tested: juxtapositional, modificational, governmental, predicational, and complemental. The participants were asked to choose the word whose morphemes went together in a similar way with the target word.

In the following example item, the target word "喝水" (hēshuǐ, to drink+water = drink water) and the option B "睡觉" (shuìjiào, to sleep+sleep = have a sleep) share the same compound structure (governmental). Option A 出去 (chūqù, exit+out = go out) is of the complemental type and Option C 肥胖 (féi pàng, fat+fat = obesity) is of the juxtapositional type. Example item: *Please choose the word whose characters go together in a similar way to the target word.*

Target word	A	B	C	Answer
e.g. 喝水	出去	睡觉	肥胖	B

There were 15 items in this test. Each correct answer was credited with one point and the total score of the test was 15.

Receptive vocabulary knowledge test. A measure of receptive vocabulary knowledge was designed based on Guo and Roehrig (2011), Nation (2001), Shiotsu and Weir (2007). The test adopts a matching format. Thirty words (28 two-character words, one three-character word, and one four-character word) were randomly selected from the word frequency list of *The Graded Chinese Syllables, Characters, and Words for the Application of Teaching Chinese to the Speakers of Other languages* (Liu & Ma, 2010). Ten words were chosen from beginning, intermediate, and advanced level word frequency lists, respectively. Another 30 words were added as distractors. Six words (three target words and three distractors) were placed in one block. The participants were asked to select the word that matches the explanation on the right. Example item: *Please choose the word on the left that matches the explanation of the word on the right.*

1.老师(teacher)	
2.树木(trees)	
3.杂志(magazine)	(1) 工作是教学生(job is teaching students)
4.花朵(flower)	(3) 可以阅读的(can be read)
5.跑步(jogging)	(5) 一种锻炼身体的方式(a way of exercising)
6.垃圾(rubbish)	

The total number of items was 30. Each correct answer was credited with one point and the total score of this test was 30.

Vocabulary synonym test. A vocabulary synonym test was designed to measure learners' receptive vocabulary depth knowledge. Thirty words were randomly selected from the word frequency list provided in *The Graded Chinese Syllables, Characters, and Words for the Application of Teaching Chinese to the Speakers of Other languages* (Liu & Ma, 2010). Ten words were chosen from beginning, intermediate, and advanced level word frequency lists, respectively. A multiple-choice format was adopted. In the following example, options A, B, C,

and D all resemble the target word orthographically. Thus, to make a correct choice, learners need to know the meaning of the target word and the four option words. Each correct answer was credited one point and the total score of this test was 30.

Example item: *Please choose the synonym for each word.*

Number	Word	A	B	C	D	Answer
Example	父亲 father	爸爸 father	爷爷 grandfather	斧头 axe	交通 transportation	A

Word order test. This test was based on Nassaji (2003) and Yeung et al. (2013). Fifteen sentences (seven simple and eight complex sentences) were prepared. Each sentence was divided into six to eight segments and scrambled. Learners were asked to arrange the segments to form meaningful and syntactically correct sentences. There were 15 items in this test. Each correct arranged sentence was credited with two points. If half of the sentence was correctedly rescrambled, one point was credited. If two continuously segments were corrected arranged, 0.5 point was credited. For example, for the item 6 ①环境 ②越来越好 ③城市的 ④变得 ⑤这个 ⑥了. If the answer was ⑤这个③城市的①环境④变得②越来越好⑥了，two points were given. If the answer was ⑤这个③城市的①环境⑥了②越来越好④变得， since the first half of the sentence was correct（⑤③①), one point was credited. If the correct answer was ⑤这个③城市的 ⑥了①环境②越来越好④变得， since only two continuously segments were correctly rearranged（⑤ ③), 0.5 point was credited.

Grammaticality judgment test. This test was based on Tong et al. (2014) and Yeung et al. (2013). Sixteen syntactically incorrect sentences were designed to test a variety of syntactic knowledge like function words, tense markers, particles, classifiers, prepositions, conjunctions and copula words. Specifically, Item 1 and 14 were testing the knowledge of corpula word “是”,

item 2, 8, 12, and 15 the knowledge of aderverbs, item 4 and 10 the knowledge of tense markers “着” , “了”, and “过”, item 3 the knowledge of paired conjunctions, item 5 the knowledge of a question word “为什么”, item 6 the knowledge of potential markers “得” and “不”, item 7 the knolwege of “把” and “被” structures, item 9 the knowledge of a resultative complement “好”, item 11 the distinction between two conjunctions “或者” and “还是”， item 13 the knowledge of a measure word “只”, item 16 the knowledge of prepositions “离” and “向” .

A correct identification of the grammatical error was credited with one point and a correct correction was credited with another point. The total score of this test was 32.

Multiple-choice test. Four reading passages were selected from Chinese books, websites, and graded readers. The lengths of the passages are 207, 337, 359, and 595 characters respectively. Passage One and Passage Three are narratives, Passage Two is a fable selected from a graded reader supplementary reading book, and Passage Four is a persuasive chosen from an online version of a Chinese newspaper. Passage One and Passage Two were modified and difficult words were replaced with easier ones. Passage Three and Four are authentic texts. I refer to Hanyu shuiping kaoshi (HSK, a standardized Chinese proficiency test) reading section and midterm and final exams for intermediate and advanced level learners at the university where I teach to make sure that the passages were at an appropriate difficulty level for intermediate and advanced level learners.

To further check the difficulty level of the texts, I used the Chinese Readibility Index Explorer for Chinese as a Foreign Language (CRIE-CFL) (Sung, Lin, Dyson, Chang, & Chen, 2015) to check the readability levels of the four reading passages. The Common European Framenwork of Reference (CEFR) was chosen as the framework for CRIE-CFL. There are six CEFR levels, A1, A2, B1, B2, C1, and C2. A1-A2 are basic users, B1-B2 are independent users,

and C1-C2 proficient users (Council of Europe, 2001). For reading specifically, learners at B1 level can "read straigntforward factual texts on subjects related to his/her field and interest with a satisfactory level of comprehension", learners at B2 can "read with a large degree of independence, adapting style and speed of reading to different texts and purposes", and C2 learners can "understand and interpret critically virtually all forms of the written language including abstract, structual complex, or higly colloquial literary and non-literary writings" (Council of Europe, 2001, p. 69). Based on the analysis results, Passage One and Two's levels were B1, Passage Three B2, Passage Four C2. The difficulty levels of the four passages are ideal for the intended test-takers. Please refer to Appendix E for the readiblity level analysis reports, which provided information on the readability levels, number of characters, number of words, number of difficult words, number of sentences, number of sentence with difficulty structures, and number of idioms of the four reading passages.

Since Passage One is short, I designed five dichotomous items. The participants were asked to mark whether each statement is true or false. For Passages Two to Four, 15 multiple-choice items were designed to measure global understanding of the passages. Items include questions on inference, main idea, thought patterns, and so on.

There were 20 items altogether and each answer was credited with two points. The total score of this test was 40 points.

Cloze test. Cloze tests are usually constcuted by deleting every n-th word from a passage and asks the test takers to restore the deleted word (Alderson, 2000, p. 207). In this study, the cloze test was constructed by deleting every 6th character from two passages. There were 37 items altogether. The participants were required to restore/supply/write the deleted characters. One sentence was left intact at the beginning to provide some contextual support. The total score

of this test was 37 points.

The word order test and the cloze test were graded by two trained native speaker raters. Any disagreement in the grading was discussed in a group of six native speaker raters and a consensus of 100% was reached after group discussion.

Table 3.1 is a summary of all the tests in the test battery and the constructs they are measuring. Please refer to Appendix B for all the tests.

Table 3. 1. Summary of Tests

Construct	Aspects measured	Test	Format	Item #	Full score
Semantic radical knowledge	Receptive	Receptive Semantic Radical Knowledge Test (RSRKT)	Fill in the blank	20	20
	Application	Semantic Radical Meaning Matching Test (SRMMT)	Multiple-choice	20	20
Character knowledge	Recognition	Lexical Decision Test (LDT)	Yes-No	39	39
	Receptive	Character Knowledge Test (CKT)	Yes-No	45	30
Vocabulary knowledge	Size	Receptive Vocabulary Knowledge Test (RVKT)	Matching	30	30
	Depth	Vocabulary Synonym Test (VST)	Multiple-choice	30	30
Morphological knowledge	Discrimination	Morpheme Discrimination Test (MDT)	Multiple-choice	20	20
	Compound structure	Compound Structure Discrimination Test (CSDT)	Multiple-choice	15	15
Grammar knowledge	Word order	Word Order Test (WOT)	Ordering segments	15	30
	Judgment	Grammaticality Judgment Test (GJT)	Judgment/ Correction	16	32
Reading comprehension	Local understanding	Cloze Test (CT)	Fill in the blank	37	37
	Global understanding	Multiple-Choice Test (MCT)	True/False Multiple-choice	20	40

3.2.3 Interview questions. Four interview questions were prepared.

(1) What do you think is very important in learning to read in Chinese? Why?

(2) What makes reading in Chinese easy or difficult? Why?

(3) While reading in Chinese, what do you do if there are characters you don't know? Why?

(4) What have you done to improve your Chinese reading? Why?

Interviewees were also asked what else they would like to share about reading in Chinese at the end of interviews.

3.3 Description of the Research Phases

After the instruments were designed, two pilot studies were conducted followed by the main study. The first pilot study was conducted to ensure that the test instructions were clear and there was only one correct answer for each item on the twelve tests. The second pilot study was conducted to ensure that the twelve tests were reliable. Also, since there were twelve tests, the second pilot study was also conducted to check how long it took the participants to finish all the tests. After the measurement instruments were finalized, the main study was conducted.

3.4 The First Pilot Study

For the pilot study one, three PhD students whose specialization was Chinese linguistics were asked to take the tests. While taking the test, they were also asked to check whether the test instructions were clear. When there were two possible answers for an item, the item was revised to make sure that only one answer was correct.

3.5 The Second Pilot Study

The main purposes of this pilot study were: (a) to check how long it took the participants to finish the background information questionnaire and all the tests in the test battery, (b) to

check the reliability of the tests, (c) to check the correlations among all the tests, and (d) to go over the interview process.

3.5.1 Participants. The second pilot study involved 18 adult L2 Chinese learners attending a public university in the U.S.A. Descriptive statistics of participant information are summarized in Table 3.2 and 3.3. The average age of the participants (9 males and 9 females) was 22.02 years (*SD* = 3.57), and the mean length of Chinese studies reported by the participants was 4.56 years (*SD* = 3.30). Forty-four percent of the participants were Chinese majors, 6% language related major, and 50% other majors. Sixteen participants grew up in U.S.A., one in Japan, and one in Vietnam. Forty-four percent of the participants were heritage learners and 56% of them were non-heritage learners. Participants were labeled as heritage learners when two conditions were met: (a) the participants indicated that they had lived with family members who were native speakers of Mandarin or other Chinese dialects for a substantial period of time, and (b) participants spoke Mandarin or another Chinese dialect with family members. Of the 18 participants, six had been to China and 12 had never been to China. On average, the participants spent 2.78 hours (*SD* = 3.18) per week reading Chinese books, websites, and newspapers. The self-reported reading proficiency was intermediate (*M* = 3, *SD* = 0.69).

Table 3. 2. Descriptive Statistics of Participants for the Second Pilot Study- Part 1

Variable	Category	Frequency	Percentage
Gender	Male	9	50%
	Female	9	50%
Grow up in	U.S.A	16	90%
	Japan	1	5%
	Vietnam	1	5%
Heritage learners	Yes	8	44%
	No	10	56%
Major	Chinese	8	44%
	Language related	1	6%
	Other	9	50%
Have been to China	Yes	6	33%
	No	12	67%

Table 3. 3. Descriptive Statistics of Participants for the Second Pilot Study- Part 2

	Min	Max	Mean	*SD*
Age	18.00	33.00	22.06	3.57
Years of learning Chinese	1.00	15.00	4.56	3.30
Hours of Reading	0.00	11.00	2.78	3.18
Speaking	2.00	4.00	2.67	0.69
Listening	2.00	4.00	2.94	0.87
Reading	2.00	4.00	3.00	0.69
Writing	1.00	4.00	2.39	0.92

3.5.2 Results. In this section, I will report test-taking time, descriptive statistics of the tests, correlations among all the tests, and the responses to interview questions. The majority of participants (16 out of 18) completed the test in two hours. Two participants spent two hours and a half on the test.

***Descriptive statistics*.** Descriptive statistics are listed in Table 3.4. In general, the test scores were normally distributed, with no skewness value exceeding plus or minus 1 and no kurtosis value plus or minus 3. Semantic radical meaning matching test and lexical decision tests were relatively easy, with mean values of 13.47 (*SD* = 1.55) and 33.50 (*SD* = 5.19), respectively. The cloze test was a little bit difficult, with a mean of 14.22 (*SD* = 9.64).

Table 3. 4. Descriptive Statistics of Tests in the Second Pilot Study

	Cronbach's Alpha	Min	Max	Mean	*SD*	Skew Ness SES= .54	Kurto Sis SEK= 1.04
Receptive semantic radical knowledge test	.91	7.00	20.00	15.17	4.83	-.74	-1.22
Semantic radical meaning matching test	.51	11.00	15.00	13.47	1.55	-.34	-1.56
Lexical decision test	.87	21.00	39.00	33.50	5.19	-1.00	.71
Character recognition test	.93	8.00	30.00	20.17	7.23	-.12	-1.22
Receptive vocabulary knowledge test	.90	9.00	29.00	18.11	6.79	.30	-1.69
Vocabulary synonym test	.79	8.00	26.00	17.56	5.18	.09	-.86
Morpheme discrimination test	.74	3.00	17.00	10.33	3.77	-.28	-.45
Compound structure discrimination test	.69	4.00	14.00	8.06	3.19	.27	-.96
Word order test	.72	11.00	28.00	18.75	4.82	.32	-.73

Grammaticality judgment test	.61	7.00	26.00	16.89	5.42	-.20	-.68
Multiple-choice test	.80	10.00	34.00	23.11	8.35	-.26	-1.12
Cloze test	.94	2.00	33.00	14.22	9.64	.45	-1.12

Bivariate correlations. Table 3.5 shows the zero-order correlations between the test scores. Most of the tests were correlated significantly and positively with each other. Receptive semantic radical knowledge and semantic radical meaning matching tests were significantly correlated ($r = .721$, $p < .01$). The two measures of character recognition, the lexical decision test and the character knowledge test, were significantly correlated as well ($r = .671$, $p < .01$). Receptive semantic radical knowledge was significantly related with one measure of character recognition, character knowledge test ($r = .521$, $p < .05$; $r = .469$, $p < .05$), but not the other, the lexical decision test.

Two measures of vocabulary knowledge, receptive vocabulary knowledge test and vocabulary synonym test, were significantly correlated with each other ($r = .849$, $p < .01$). The morpheme discrimination test was significantly correlated with the compound structure discrimination test ($r = .546$, $p < .01$). However, no significant relationship was found between the word order test and the grammaticality judgment test ($r = .321$, $p > .05$), two measures of grammar knowledge.

The two measures of reading comprehension, the multiple-choice test and the cloze test, were significantly related to each other ($r = .806$, $p < .01$). The multiple-choice test was significantly correlated with every other test except the lexical decision test. The cloze test had a significant relationship with every test except the semantic radical meaning matching test, the lexical decision test, and the compound structure discrimination test.

Table 3. 5. Intercorrelations among Twelve Tests Measuring Radical Knowledge, Character Recognition, Vocabulary Knowledge, Morphological Knowledge, Grammar Knowledge and Reading Comprehension

	2	3	4	5	6	7	8	9	10	11	12
1. RSRKT	.721**	.177	.521*	.430*	.471*	.336	.492*	.222	.567**	.517*	.449*
2. SRMMT	1	.146	.469*	.361	.294	.063	.505*	.168	.302	.416*	.235
3. LDT		1	.671**	.379	.538*	.345	.098	.106	.092	.361	.127
4. CKT			1	.834**	.886**	.733**	.387	.468*	.526*	.829**	.657**
5. RVKT				1	.847**	.843**	.562**	.582**	.638**	.869**	.810**
6. VST					1	.866**	.397	.496*	.681**	.882**	.801**
7. MDT						1	.546**	.437*	.620**	.745**	.763**
8. CSDT							1	.062	.358	.444*	.371
9. WOT								1	.321	.531*	.686**
10. GJT									1	.754**	.763**
11. MCT										1	.806**
12. CT											1

Note. RSRKT = receptive semantic radical knowledge test; SRMMT = semantic radical meaning matching test; LDT = lexical decision test; CKT = character knowledge test; RVKT = receptive vocabulary knowledge test; VST = vocabulary synonym test; MDT = morpheme discrimination test; CSDT = compound structure discrimination test; WOT = word order test; GJT = grammaticality judgment test; MCT = multiple choice test; CT = cloze test.

* $p < 05$; ** $p < 01$.

Qualitative results. One participant, Tracy, was interviewed on her opinions about reading in Chinese. Since Tracy was the only participant, I transcribed her main responses for each question as shown in Table 3.6.

Tracy has taken Chinese for two semesters and it was her third semester during the time of data collection. She liked her Chinese class because her classmates were fun. Tracy thought that the most important thing in reading Chinese was being familiar with characters. The abundance of characters makes it difficult to read in Chinese. When there were unknown characters, she first inferred their meaning from the context. She also used radical knowledge to infer the meaning, but it was her third option. In the end of the interview, she added that her Cantonese background helped her Chinese reading.

Table 3. 6. Reponses to Interview Questions in the Second Pilot Study

Interviewer: *What do you think is very important in learning to read in Chinese? Why?*
Tracy: I think the most important thing is to be familiar with characters because that is what will allow you to understand what is being said, and will also help you read faster. I feel that even if you are not very familiar with the grammar structure, if you know the meaning of the characters, you can kind of guess.

Interviewer: What makes reading in Chinese easy?

Tracy: I feel that the Chinese grammar structure is much simpler

Interviewer: What makes reading in Chinese difficult?

Tracy: I am still learning, I feel it is difficult because there are so many characters and every character has different meaning

Interviewer: While reading in Chinese, what do you do if there are characters you don't know? Why?

Tracy: I will try to read the whole sentence first and then see if I can guess what is trying to say, and like infer from previous sentences what was happening in order to kind of guess. I guess you can also look at different parts of the character, when I was taking your test, some characters have the hand radical, I knew that has something to do with action. I know that sometimes it is not the rule for everything.

Interviewer: What have you done to improve your Chinese reading?

Tracy: I purposefully made a Wechat and add my family in China so that I can read their posts.

In class, we do the Reading for Fun, it helps with the speed

Interviewer: Do you want to add something?

Tracy: I feel that knowing a little bit Cantonese helps with grammar, cause I noticed that people who don't have a background in it they struggle a little with the grammar.

3.5.3 Limitations and suggestions for future research. Due to the small sample size, the SEM analysis could not be conducted. Three tests (semantic radical meaning matching test, grammaticality judgment test, and compound structure discrimination test) all had a Cronbach's alpha value below .70, which indicates that the tests were not very reliable. With a larger sample size, the tests might be more reliable. Also, the two measures of grammar knowledge are not significantly related with each other. The next iteration of the study should also conduct item analysis to delete items that were not functioning very well. Since the interview generated

interesting data, more interview questions could be added like “How is Chinese reading taught in your class?” or “what do you think of the relationship between characters and words”?

3.6 The Main Study

3.6.1 Data collection. The data collection of the main study was conducted from March 2017 to August 2017 in two cities in China. Program administrators and language instructors in seven universities in four cities in China were contacted through emails, Wechat, and Facebook for data collection. A brief summary of the study was also sent to the program administrators and language instructors. Data were successfully collected from Lanzhou University, Northwest Normal University, Beijing University, and Lanzhou University of Technology.

I went to Lanzhou from March 2017 to April 2017 for the first round of data collection. Data were collected from two universities, Lanzhou University and Northwest Normal University. Short messages with recruitment information were sent out to the language instructors, and were in turn sent to students who might be interested in the study. Students who were willing to participate in the study took the test in classrooms in their universities. To participate in the main study, participants needed to have intermediate level Chinese language proficiency or above. During the first round of data collection, I collected data from 174 participants.

The second round of the data collection was conducted during summer 2017. Data were collected from Beijing University and Lanzhou University of Technology. In both universities, the program administrators were contacted first and permission from them was obtained to contact language teachers. After getting permission from language teachers, I went to the classrooms to distribute recruitment flyers and recruit participants. Students willing to take the

test came to take the tests at agreed time and place. Altogether 35 participants were recruited during the second round of data collection.

The tests were translated into four languages, Chinese, English, Russian and Arabic, to meet the needs of different participants. The tests were originally prepared in English and Chinese. Before the data collection started in China, I consulted the language program administrators about the participants' English profiency level. Based on their feedback and suggestions, Russian and Arabic versions of the tests were also prepared. Even though some participants' L1 was not Russian, their Russian proficiency was good enough for them to understand the test instructions. The particpants chose which version of the test they would like to take. The tests instructions were either in two langauges, for example, English and Chinese, Russian and Chinese, or three languages, English, Arabic and Chinese. Before the test started, the participants were reminded that they could ask questions regarding test instructions or the meaning of a test item, and any question raised was answered during the test taking.

The Russian version of the test was translated by one Russian language teacher in Northwest Normal University in China and was proofread by another Russian language teacher in the same university. The Arabic version was translated by a native Arabic speaker who was also an advanced learner of Chinese. I checked the translation to make sure that the translator translated the required parts and the format was appropriate.

3.6.2 Participants. Altogether 209 participants took the test. After the listwise deleting of missing values and outliers, 134 participants were left. This section presents the 134 participants' responses to the language-background survey. The language background survey asked the participants background information like age, gender, major, HSK level, native language, birth place, hometown, heritage learner status, years of learning Chinese, the time spent on reading in

Chinese per week (in hours), and self-assessed Chinese proficiency levels in listening, speaking, reading and writing. Tables 3.7, 3.8, 3.9, 3.10, and 3.11 all present the descriptive statistics of the participants.

Table 3. 7. Descriptive Statistics of the Participants of the Main Study - Part 1

	N	Min	Max	Mean	SD	Skewness	(SES)	Kurtosis	(SEK)
Age	132	18	36	21.75	3.146	2.222	(.211)	6.477	(.419)
YearsCL	129	1	144	32.47	17.712	2.184	(.213)	11.313	(.423)
Length	85	0	72	13.52	14.181	2.471	(.261)	6.105	(.517)
Speaking	132	1	4	2.76	.722	-.340	(.211)	.095	(.419)
Listening	129	1	4	3.03	.672	-.506	(.213)	.776	(.423)
Reading	129	1	4	2.89	.710	-.241	(.213)	-.080	(.423)
Writing	128	1	4	2.63	.663	-.255	(.214)	.012	(.425)

The age of the participants ranged from 18 to 36, with a mean of 21.75 years old (Table 3.7). On average, the participants had learned Chinese for two years and eight months (32.47 months). With 1 indicating poor, 2 basic, 3 intermediate, and 4 advanced on the self-assessed ability scale, the participants rated their Chinese speaking ability level at 2.76, listening ability level 3.03, reading ability level 2.89, and writing ability level 2.63.

As for gender, thirty-nine percent of the participants were male and 60.9% of them were female (Table 3.8). One-hundred six had experience living in China and two of them lived in Hong Kong. Nobody had lived in Macao or Taiwan before. Sixty-nine percent of the participants (93 out of 134) reported their HSK test level. Among those who reported their HSK test level, five (5.38%) had passed HSK level 3, 31 participants (33.3%) passed level 4, 42 (45.1%) participants passed level 5, and 11 (11.83%) passed level 6. Since HSK level 3 and 4 were regarded as intermediate level and 5 and 6 were regarded as advanced level, we can say that 95.7 % of the participants who reported their HSK test scores had an intermediate or above Chinese proficiency level.

Table 3.8 also shows that 15 participants (11.9%) had experience living with Mandarin or Chinese dialect speaking family members and 111 participants (88.1%) did not. Eighteen (14.3%) participants spoken Mandarin or Chinese dialects with their family members while 108 of them (85.7%) did not.

Table 3. 8. Descriptive Statistics of the Participants of the Main Study - Part 2

Variable	Category	Frequency	Percentage
Gender	Male	52	39.1%
	Female	81	60.9%
Living in China	Mainland	106	98%
	Hong Kong	2	2%
	Taiwan	0	0%
	Macao	0	0%
HSK	Level 1	2	2.15%
	Level 2	2	2.15%
	Level 3	5	5.38%
	Level 4	31	33.33%
	Level 5	42	45.16%
	Level 6	11	11.83%
Lived with a Mandarin speaking family member	Yes	15	11.9%
	No	111	88.1%
Speak Mandarin or other Chinese languages with family members	Yes	18	14.3%
	No	108	85.7%

As for the majors, the majority of the participants' majors were related to Chinese language or culture (Table 3.9). For example, sixty-four participants (50%) majored in Chinese international communication with a focus on teaching Chinese as a foreign/second language. Thirty-six participants (28.1%) majored in Chinese linguistics and three (2.3%) in China studies.

Table 3. 9. Descriptive Statistics of the Participants of the Main Study - Part 3

Major	Frequency	Percent
Chinese international communication	64	50.0%
Chinese linguistics	36	28.1%
Food engineering	4	3.1%
Engineering	4	3.1%
China studies	3	2.3%
International cultural communication	2	1.6%

Economics	2	1.6%
Tourism	2	1.6%
Business management	2	1.65
International relations	2	1.6%
International law	2	1.6%
Public health	1	.8%
Enterprise Management	1	.8%
Translation	1	.8%
Literature	1	.8%
Biotechnology	1	.8%

Participants' birth places and hometowns are reported in Table 3.9. The participants in this study were born in 32 countries. Over half of the participants (69, 52.3%) were born in countries in central Asia, including Kazakhstan (35, 26.5%), Kyrgyzstan (25, 18.9%), Uzbekistan (8, 6.1%), and Tajikistan (1, 0.8%). South Korea (14, 10.6%) and Japan (5, 3.8%) were the third and fourth country from which the most participants were born. Four participants (3%) were born in Russia, four (3%) in Thailand, four (3%) in Egypt, and four (3%) in the United Kingdom.

The participants of this study grew up in 30 countries. Over half of the participants (71, 54.9%) grew up in countries in central Asia, including Kazakhstan (37, 28.24%), Kyrgyzstan (24, 18.32%), Uzbekistan (9, 6.87%), and Tajikistan (1, 0.76%). Twelve participants (9.15%) grew up in seven African countries, including Egypt (4, 3.05%), Ethiopia (2, 1.53%), Nigeria (2, 1.53%), Cameron (1, 0.76%), Benin (1, 0.76%), Tanzania (1, 0.76%), and Mauritania (1, 0.76%). Other countries where the participants grew up included South Korea (14, 10.69%), Japan (5, 3.82%), Thailand (4, 3.05%), and Russia (3, 2.29%).

Table 3. 10. Descriptive Statistics of the Participants of the Main Study - Part 4

Birth place	Frequency	Percent	Home countries	Frequency	Percent
Kazakhstan	35	26.50%	Kazakhstan	37	28.24%
Kyrgyzstan	25	18.90%	Kyrgyzstan	24	18.32%

South Korea	14	10.60%	South Korea	14	10.69%
Uzbekistan	8	6.10%	Uzbekistan	9	6.87%
Japan	5	3.80%	The United Kingdom	5	3.82%
Russia	4	3%	Japan	5	3.82%
Thailand	4	3%	Thailand	4	3.05%
Egypt	4	3%	Egypt	4	3.05%
The United Kingdom	4	3%	Russia	3	2.29%
Vietnam	2	1.50%	Vietnam	2	1.53%
Ethiopia	2	1.50%	Ethiopia	2	1.53%
Nigeria	2	1.50%	Nigeria	2	1.53%
Saudi Arabia	2	1.50%	Saudi Arabia	2	1.53%
Indonesia	2	1.50%	Turkey	2	1.53%
China	2	1.50%	Tajikistan	1	0.76%
Tajikistan	1	0.80%	Cameroon	1	0.76%
Cameroon	1	0.80%	Benin	1	0.76%
Benin	1	0.80%	Ukraine	1	0.76%
Ukraine	1	0.80%	France	1	0.76%
France	1	0.80%	Tanzania	1	0.76%
Tanzania	1	0.80%	Mauritania	1	0.76%
Mauritania	1	0.80%	Columbia	1	0.76%
Columbia	1	0.80%	Pakistan	1	0.76%
Sudan	1	0.80%	Indonesia	1	0.76%
Italy	1	0.80%	Germany	1	0.76%
Pakistan	1	0.80%	The United States	1	0.76%
Germany	1	0.80%	North Korea	1	0.76%
The United States	1	0.80%	China	1	0.76%
North Korea	1	0.80%	Yemen	1	0.76%
Canada	1	0.80%	Mongolia	1	0.76%
Yemen	1	0.80%	Total	131	100%
Mongolia	1	0.80%			
Total	132	100%			

Table 3.11 presents the participants' native languages. Altogether, one hundred twenty seven participants out of 134 (with seven missing values) spoke twenty languages. Twenty-one of them (16.54%) spoke Kazakh, nineteen (14.96%) Dungan, seventeen (13.39%) Russian, fifteen Korean (11.81%) and ten English (7.87%). Other languages the participants spoke

included Kyrgyz, Uzbek, Arabic, Japanese, Thai, French, Vietnamese, Spanish, Indonesian, German, Tajikistan, Swahili, Italian, Urdu, and Mongolian.

Table 3. 11. Descriptive Statistics of the Participants of the Main Study - Part 5

Native language	Frequency	Percent
Kazakh	21	16.54%
Dungan	19	14.96%
Russian	17	13.39%
Korean	15	11.81%
English	10	7.87%
Kyrgyz	8	6.30%
Uzbek	6	4.72%
Arabic	6	4.72%
Japanese	5	3.94%
Thai	4	3.15%
French	3	2.36%
Vietnamese	2	1.57%
Spanish	2	1.57%
Indonesian	2	1.57%
German	2	1.57%
Tajikistan	1	0.79%
Swahili	1	0.79%
Italian	1	0.79%
Urdu	1	0.79%
Mongolian	1	0.79%
Total	127	100%

3.6.3 Procedure. All the tests were paper-and-pencil tests. First, the participants were given the consent forms to read and sign. Then, the participants were asked to fill in the background information questionnaire. After that, they were given the test booklets and told that they had two hours to finish the test. In the background questionnaire, students who were willing to participate in the interview were asked to leave their email address and phone number.

3.6.4 Data screening. Before conducting SEM analysis, the original data file was screened for problems. The data screening procedures recommended by Kline (2011) were

followed. To be specific, I checked missing values, outliers, multivariate normality, univariate normality, and collinearity. After data screening, one hundred thirty-four participants were left.

Missing values. All the test takers with missing values on any of the twelve sub-tests were deleted from the dataset. First, all the items for each subtest, for example, vocabulary knowledge test, were added to form a total score of that test. The participants with a zero total score for each test were deleted. Table 3.12 shows the participants whose data were deleted.

Table 3. 12. Missing Data Deletion

Sub-tests	Participants with missing values
Receptive semantic radical knowledge test	ID 2, 7, 20, 32, 34, 35, 40, 41, 46, 67, 70, 81, 82, 115, 139, 141, 158, 198, 200, 201, 204
Cloze test	ID 8, 19, 22, 30, 33, 43, 50, 51, 57, 61, 69, 90, 111, 113, 127, 129, 143, 144, 148, 162, 186, 209
Multiple-choice test	ID 176
Semantic radical meaning matching test	ID 13, 44, 45, 79, 140
Lexical decision test	ID 128, 136
Character knowledge test	ID 119, 116, 117
Receptive vocabulary knowledge test	ID 10
Vocabulary synonym test	No deletion
Morpheme discrimination test	ID 62, 99
Compound structure discrimination test	ID 15, 16, 27, 55, 58, 63, 165
Word order test	No deletion
Grammaticality judgment test	ID 5, 9, 18, 24, 28, 39, 133, 135, 172

Univariate outliers. Outliers are the scores that are different from the rest of scores. If a case has an extreme value on a single variable, it is a univariate outlier (Kline, 2011, p. 54). In this study, univariate outliers were found by inspecting frequency distributions of z scores. $z > 3.00$ indicates an outlier. After inspecting each participant's z scores of each sub-test, two

univariate outliers were identified. Participant #17 had a z-score value of -3.85 on the lexical decision test and participant #134 had a z-score value of - 4.40 on the same test. Those two participants were deleted as univariate outliers.

Multivariate outliers. A multivariate variable has extreme scores on two or more variables. One of the common method used is the Mahalanobis distance (*D*) statistics, which indicates the distance in standard deviation units between a set of scores (Vector) for an individual case and the sample means for all variables (Centroid), correcting for intercorrelations (Kline, 2011, p. 54). After calculating the Mahalanobis score for each participant and comparing the score with the critical value, participants #17 and #134 with p values of 0.001 and 0.000 were identified as multivariate outliers. Since those two participants had been identified as univariate outliers, this further confirmed that those two participants were outliers in this study.

Multicollinearity. When the predictors are too highly correlated, the problem is referred to as multicollinearity (Tabachnick & Fidell, 2007). To test the multicollinearity issue, tolerance and variance inflation factors (VIF) were calculated for the ten tests to measure five component skills (Table 3.13). Tolerance indicates the proportion of total standardized variance that is unique to one variable and not explained by all the other variables. A tolerance value < .01 may indicate extreme multicollinearity issue. Variance inflation factors indicate the proportion of total standardized variance over unique variance. A VIF value > 10.0 may indicate multicollinearity issue. Table 3.13 shows the tolerance and VIF values for the ten predictors of this study. The results showed that there was no multicollinearity issue with the data.

Table 3. 13. Collinearity Statistics

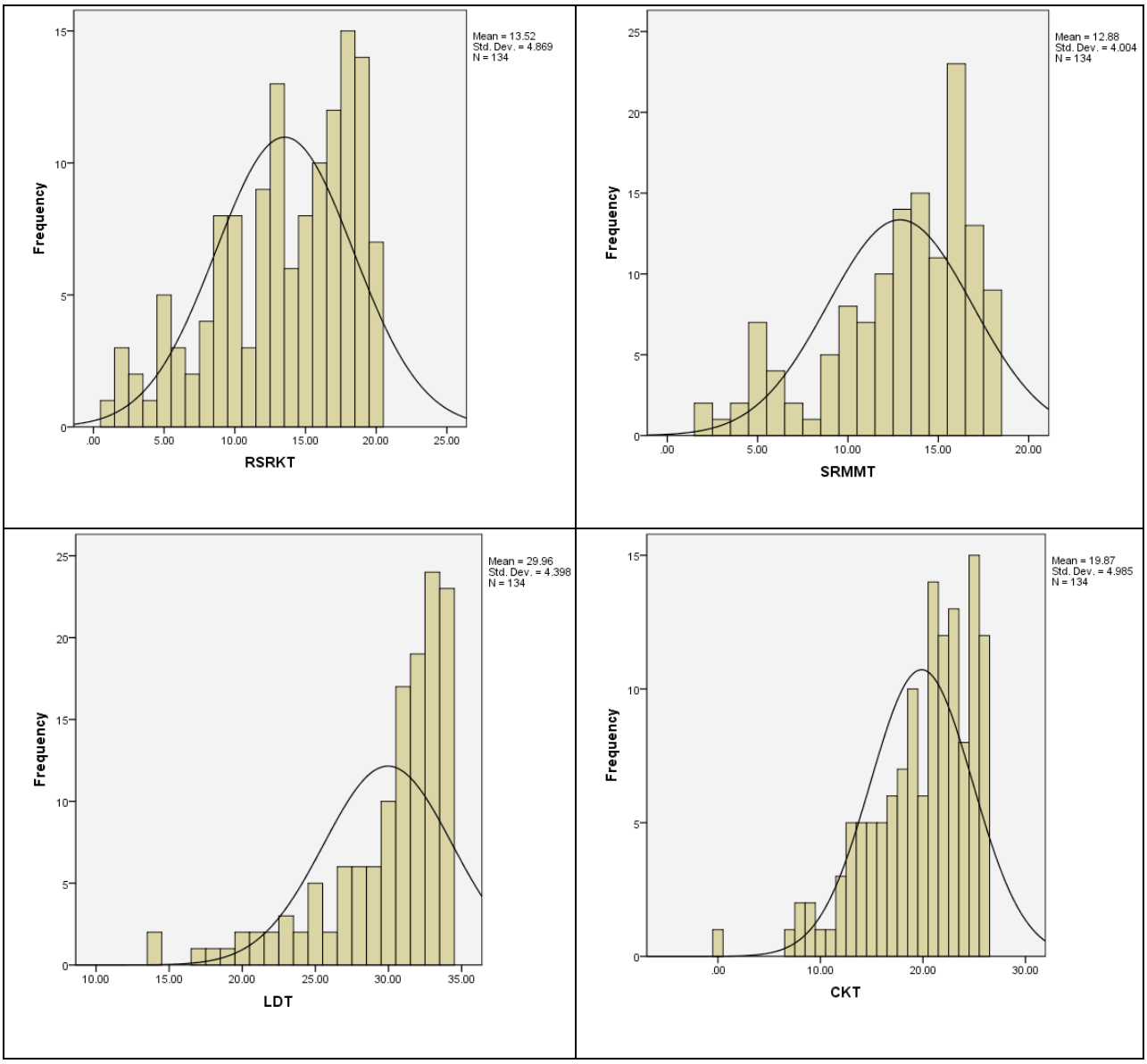
	Collinearity Statistics	
	Tolerance	VIF
Receptive semantic radical knowledge test	0.531	1.882

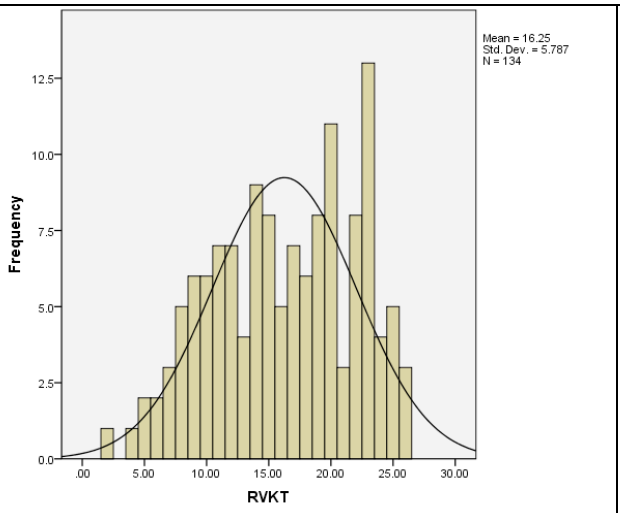
Semantic radical meaning matching test	0.623	1.605
Lexical decision test	0.492	2.032
Character knowledge test	0.407	2.455
Receptive vocabulary knowledge test	0.255	3.927
Vocabulary synonym test	0.407	2.457
Morpheme discrimination test	0.447	2.237
Compound structure discrimination test	0.662	1.511
Word order test	0.398	2.511
Grammaticality judgement test	0.569	1.757

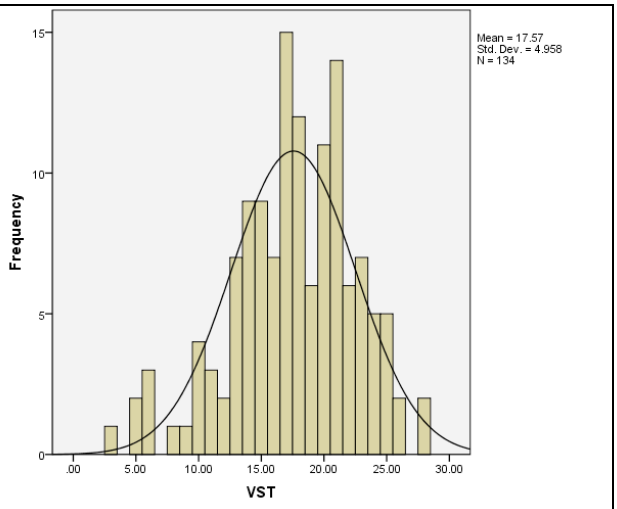
Normality. The normality of the data was also checked. The descriptive statistics, skewness, and kurtosis of the 12 subtests are presented in Table 3.14. Figure 3.1 shows the histograms of the 12 subtests. The skewness and kurtosis figures were within the range of mean ±3 standard deviations (Tabachnick & Fidell, 2007). In general, the data for each subtest were normally distributed.

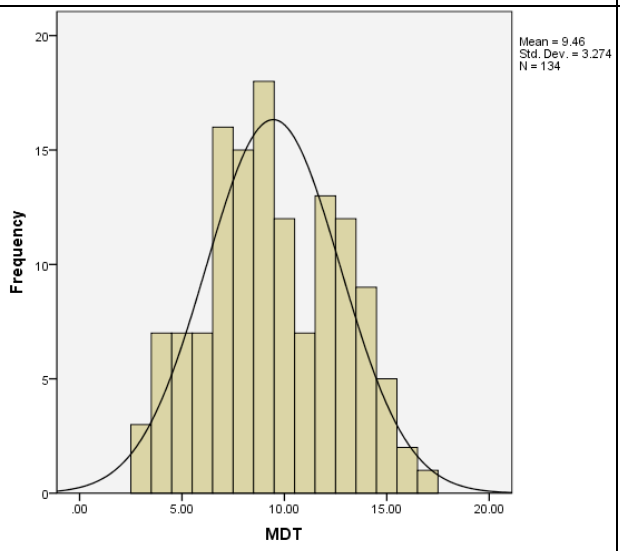
Table 3. 14. Descriptive Statistics of Each Subtest

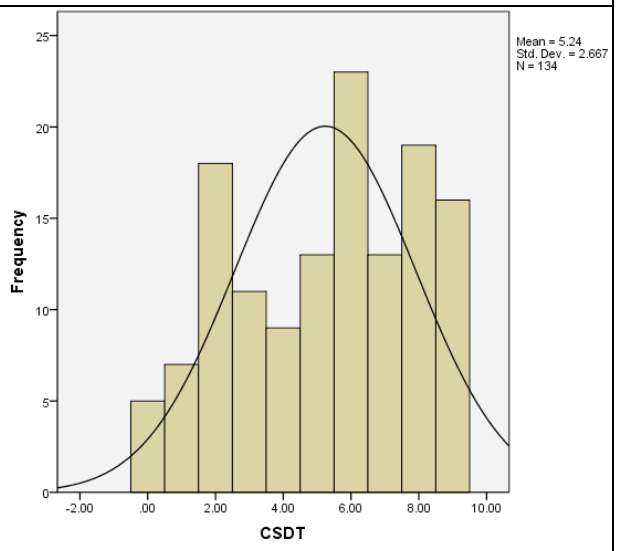
n = 134 Subtest	*k*	Possible range	Min	Max	*Mean*	*SD*	Skewness SE = .209	Kurtosis SE = .416
RSRKT	20	0-20	1.00	20.00	13.52	4.87	-0.68	-0.39
SRMMT	18	0-18	2.00	18.00	12.88	4.00	-0.93	0.09
LDT	34	0-34	14.00	34.00	29.96	4.40	-1.60	2.31
CKT	26	0-26	0.00	26.00	19.87	4.99	-1.03	1.14
RVKT	26	0-26	2.00	26.00	16.25	5.79	-0.23	-0.91
VST	29	0-29	3.00	28.00	17.57	4.96	-0.51	0.27
MDT	17	0-17	3.00	17.00	9.46	3.27	0.07	-0.76
CSDT	9	0-9	0.00	9.00	5.24	2.67	-0.27	-1.09
WOT	14	0-28	4.00	28.00	17.79	5.17	-0.26	-0.25
GJT	15	0-30	2.00	30.00	17.22	6.98	-0.48	-0.46
MCT	14	0-28	2.00	28.00	18.87	6.47	-0.61	-0.39
CT	33	0-33	0.00	31.00	13.72	6.95	0.13	-0.50

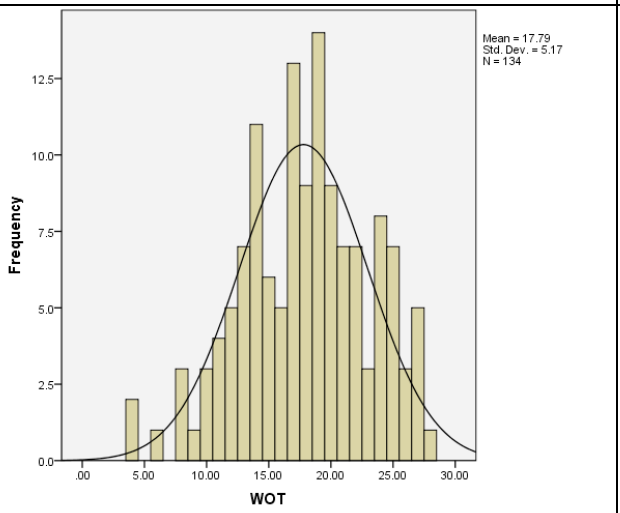

Mean = 13.52
Std. Dev. = 4.869
N = 134
Frequency
RSRKT
Mean = 12.88
Std. Dev. = 4.004
N = 134
Frequency
SRMMT
Mean = 29.96
Std. Dev. = 4.398
N = 134
Frequency
LDT
Mean = 19.87
Std. Dev. = 4.985
N = 134
Frequency
CKT

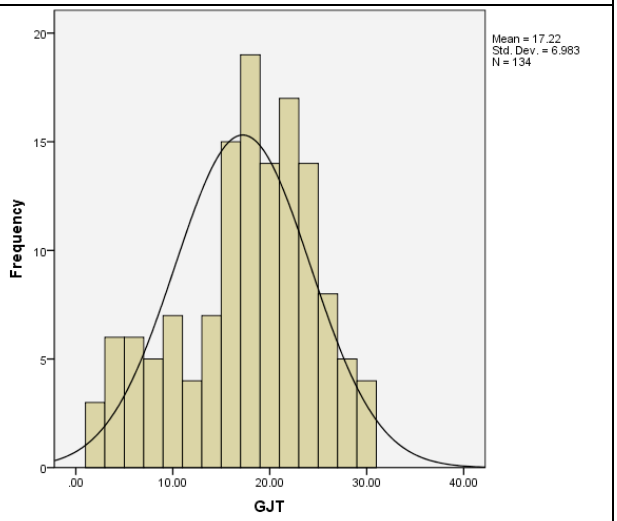

Mean = 16.25
Std. Dev. = 5.787
N = 134
Frequency
RVKT


Mean = 17.57
Std. Dev. = 4.958
N = 134
Frequency
VST


Mean = 9.46
Std. Dev. = 3.274
N = 134
Frequency
MDT


Mean = 5.24
Std. Dev. = 2.667
N = 134
Frequency
CSDT


Mean = 17.79
Std. Dev. = 5.17
N = 134
Frequency
WOT


Mean = 17.22
Std. Dev. = 6.983
N = 134
Frequency
GJT

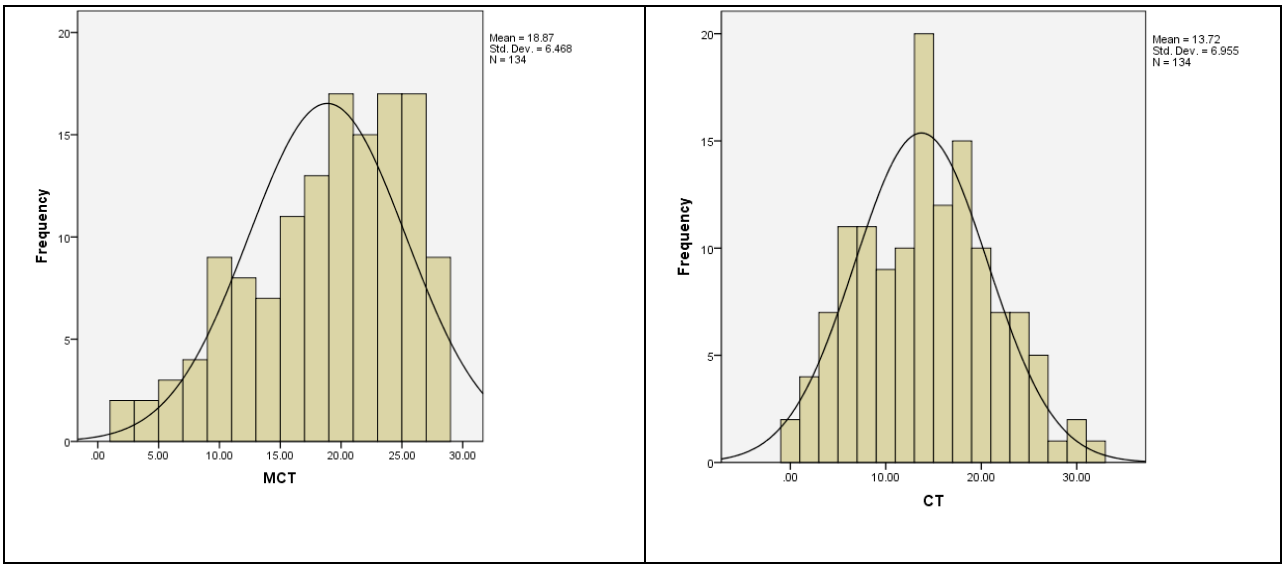


Figure 3. 1. Histograms of the Twelve Subtests

Reliability. In order to make sure that each test was reliable, reliability analysis was conducted for each test. Items with low item-total reliability were deleted and Cronbach's Alpha values were calculated based on the remaining items for each test. Table 3.15 presents the Cronbach's Alpha value change after certain items were deleted for each test. For the descriptive statistics of each item in the twelve tests, please refer to the Appendix D. The Cronbach's Alpha values for the morpheme discrimination, compound structure discrimination, and multiple choice tests were .710, .789, and .783 respectively, and the Cronbach's Alpha values of the other nine subtests were all above .800, which indicated that the reliabilities of the 12 tests were satisfactory.

Table 3. 15. Reliability of the Twelve Subtests

Tests	# of items	Items deleted	# of items left	Reliability-change
Receptive semantic radical knowledge test	20	No	20	.886-.886
Semantic radical meaning matching test	20	RM 1, 14	18	.829-.837
Lexical decision test	39	LD 18, 38, 39, 4, 37	34	.858-.866
Character knowledge test	30	CK 15, 28, 30, 14	26	.868-.881
Receptive vocabulary knowledge test	30	VK1, 4, 28, 30	26	.883-.888
Vocabulary synonym test	30	VS 27	29	.815-.816

Morpheme discrimination test	20	MD 2, 6, 20	17	.673-.710
Compound structure discrimination test	15	CS 2, 6, 9, 10, 1, 8	9	.716-.789
Word order test	15	WO 2	14	.811-.814
Grammaticality judgment test	16	GJT2	15	.812-.813
Multiple choice test	20	MC 1, 5, 12, 13, 17, 18	14	.742-.783
Cloze test	37	CT 3, 4, 7, 28	33	.889-.890

***Correlation*.** As seen in Table 3.16, the twelve tests were all significantly related to each other ($p < .01$).

Table 3. 16. Correlation Among the Twelve Subtests

	1	2	3	4	5	6	7	8	9	10	11	12
1.RSRKT	1	.575**	.435**	.499**	.544**	.347**	.387**	.286**	.393**	.374**	.413**	.395**
2.SRMMT		1	.376**	.335**	.388**	.328**	.308**	.222**	.257**	.281**	.379**	.269**
3.LDT			1	.715**	.553**	.512**	.490**	.311**	.495**	.414**	.434**	.481**
4.CKT				1	.659**	.614**	.592**	.328**	.590**	.401**	.550**	.566**
5.RVKT					1	.693**	.704**	.487**	.730**	.565**	.664**	.708**
6.VST						1	.601**	.413**	.660**	.524**	.642**	.629**
7.MDT							1	.424**	.570**	.400**	.611**	.518**
8.CSDT								1	.397**	.423**	.424**	.422**
9.WOT									1	.580**	.679**	.690**
10.GJT										1	.493**	.591**
11.MCT											1	.566**
12.CT												1

Note. RSRKT = receptive semantic radical knowledge test; SRMMT = semantic radical meaning matching test; LDT = lexical decision test; CKT = character knowledge test; RVKT = receptive vocabulary knowledge test; VST = vocabulary synonym test; MDT = morpheme discrimination test; CSDT = compound structure discrimination test; WOT = word order test; GJT = grammaticality judgment test; MCT = multiple choice test; CT = cloze test.

* $p < .05$; ** $p < .01$.

3.6.5 Data analysis for the main study

This study collected both quantitative data and qualitative data. To answer the first research question, the hypothesized SEM model was first tested to see whether it matched the observed data. If the model was not identifiable or the model fit indices were not satisfactory, then the model would be respecified and retested.

The qualitative interview and focus group data were transcribed and analyzed using Nvivo for Mac to identify the themes, and the frequency of each theme was counted and reported. The quantitative and qualitative data were also compared and contrasted to see whether they converged or diverged with regard to the main findings of the study.

CHAPTER 4
RESULTS

4.1 Introduction

This chapter answers the four research questions raised in Chapter 2. The first research question asks the relationship between component skills and reading comprehension and is answered by SEM. The second research question asks which component skills can best distinguish high-skilled, middle-skilled, and low-skilled readers. This question was answered by a discriminant analysis. The third research question is answered using qualitative interview and focus group data. Finally, this chapter elaborates on how qualitative and quantitative data converge and diverge on the main findings of this study.

4.2 RQ 1: *What are the relationships among radical knowledge, character recognition, vocabulary knowledge, morphological knowledge, grammar knowledge, and L2 Chinese reading comprehension?*

In order to answer this research question, initial confirmatory SEM was conducted to test the hypothesized SEM model. The subsequent principal axis factoring (PAF) analysis was implemented to generate suggestions for model re-specification. The data was analyzed using Mplus 7. The reporting of the SEM results followed Kline's (2011) guidelines of reporting SEM analyses.

4.2.1 Measurement model. This study adopted a multiple-indicator measurement approach, where more than one observed variable was used to measure the same construct. The main reason of adopting this approach is that a single measure would reflect just a facet of the construct. Each measure in a multiple-measurement approach acts as a separate indicator of the same underlying factor (Kline, 2011, p.97).

4.2.2 Initial confirmatory SEM. Prior to conducting the initial SEM, the multivariate normality assumption was checked and met.

4.2.3 Results of parameter estimates and model fit indices. Maximum likelihood estimation was adopted as recommended by Kline (2011). The unstandardized parameter estimates and standard error, and standardized parameter estimates are reported in Table 4.1. Figure 4.1 presents the original model with standardized parameter estimates and residual variance. Among the 19 parameters, fourteen of them were significant at $p < .05$. Radical knowledge had a significant direct effect on character recognition. The direct effect from morphological knowledge to vocabulary knowledge was also statistically significant. However, the five direct paths from radical knowledge, character knowledge, vocabulary knowledge, morphological knowledge, and grammar knowledge to reading comprehension were not significant.

The measurement model of the reading comprehension, assessed by multiple-choice test and a cloze test, was designed to tap into higher-level comprehension ability. The factor loadings of the measurement model show that the reading comprehension ability was adequately measured by the two subtests: 1 (multiple-choice test) and 0.57 (cloze test). When the factor loadings were transferred to R^2, the effect size of multiple-choice test was 1 and the cloze test was .32 (.57*.57). The measurement model of radical knowledge, as assessed by receptive semantic radical knowledge test and semantic radical meaning matching test, was designed to tap into participants' semantic radical knowledge. This knowledge represents the participants' knowledge of the meaning of high frequency semantic radicals, and their ability to guess the meaning of an unknown character based on their knowledge of semantic radicals. The factor loadings suggested that the construct was better measured by the receptive semantic radical

knowledge test (.65) than by the semantic radical meaning matching test (.53). When the factor loadings were transferred to R^2, it indicated the percentage of the variance in the observed variables that can be explained by the measurement model. Thus, the measurement model of radical knowledge can explain 42% (0.65*0.65) of the variance of the receptive semantic radical knowledge test and 28% (.53*.53) of the variance of semantic radical meaning matching test.

Table 4. 1. Parameter Estimates of the Hypothesized SEM Model

Parameter	Unstandardized		Standardized	
	Estimate	S.E.	Estimate	*p*
Semantic radical knowledge → RSRKT	1.00	0.00	0.65	0.00
Semantic radical knowledge → SRMMT	0.67	0.12	0.53	0.00
Character knowledge → LDT	1.00	0.00	0.81	0.00
Character knowledge → CKT	1.18	0.11	0.88	0.00
Vocabulary knowledge → RVKT	1.00	0.00	0.89	0.00
Vocabulary knowledge → VST	0.76	0.07	0.78	0.00
Morphological knowledge → MDT	1.00	0.00	0.75	0.00
Morphological knowledge → CSDT	0.56	0.09	0.52	0.00
Grammar knowledge → WOT	1.00	0.00	0.87	0.00
Grammar knowledge → GJT	1.03	0.13	0.66	0.00
Reading comprehension → MCT	1.00	0.00	1.00	NA
Reading comprehension → CT	0.61	0.08	0.57	0.00
Semantic radical know. → Character knowledge	1.07	0.16	0.91	0.00
Morphological know. → Vocabulary knowledge	2.19	0.20	1.05	0.00
Semantic radical know. → Reading comp.	0.42	1.00	0.20	0.68
Character know. → Reading comp.	0.51	0.58	-0.29	0.38
Vocabulary know. → Reading comp.	1.11	0.77	0.88	0.15
Morphological know. → Reading comp.	0.59	1.35	-0.22	0.66
Grammar know. → Reading comp.	0.28	0.50	0.19	0.58

Note: Semantic radical know. = Semantic radical knowledge

Character know. = Character knowledge

Vocabulary know. = Vocabulary knowledge

Morphological know. = Morphological knowledge

Reading comp. = Reading comprehension

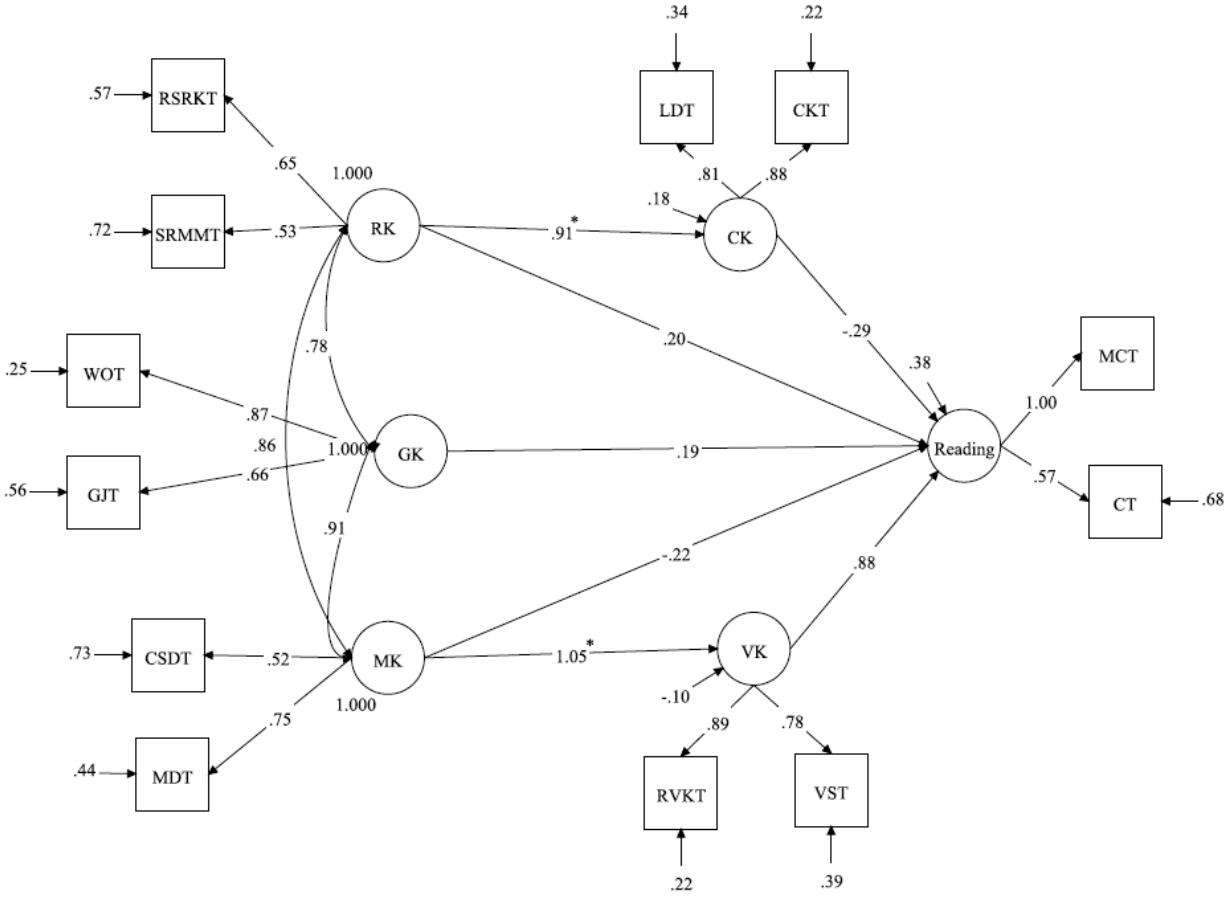


Figure 4. 1. The Hypothesized Model Examining the Effects of Radical Knowledge, Character Knowledge, Vocabulary Knowledge, Morphological Knowledge, and Grammar Knowledge on Reading Comprehension.

The direct paths from radical knowledge to character knowledge and from morphological knowledge to vocabulary knowledge were significant at $p < .05$.

Two tests were designed to measure character knowledge: lexical decision test and character knowledge test. The factor loadings indicated that the construct was adequately assessed by the lexical decision test (.81) and character knowledge test (.88). The measurement

model explained 66% (0.81*0.81) of the variance of the lexical decision test and 77% of the variance of the character knowledge test.

The measurement model of vocabulary knowledge, assessed by receptive vocabulary knowledge test and vocabulary synonym test, was designed to tap into the size and depth of vocabulary knowledge. The factor loadings were high at .89 for receptive vocabulary knowledge and .78 for vocabulary synonym test. The proportions of the variance in the receptive vocabulary knowledge test and the vocabulary synonym test that were explained by the measurement model was 79% (.89*.89) and 61% (.78*.78) respectively.

Assessed by morpheme discrimination test and compound structure discrimination test, the measurement model of morphological knowledge tapped into the participants' knowledge of morphemes and how morphemes were combined to form Chinese words. The factor loadings suggest that morphological knowledge was well measured by morpheme discrimination test (.75), but the factor loading of compound structure discrimination test (.52) was moderate. The measurement model explained 56% of the variance of the morpheme discrimination test and 27% of the variance of compound structure discrimination test.

The measurement model of grammar knowledge was designed to tap into the participants' knowledge of Chinese grammar including but not limited to word order, prepositions, and conjunctions. The factor loadings indicated that the word order test (.87) and the grammaticality judgement test (.66) adequately measured the grammar knowledge. Seventy-six percent (.87*.87) of the variance of the word order test and 44% (.66*.66) of the variance of the grammaticality judgment test were explained by the measurement model of grammar knowledge.

An important goal of this dissertation is to examine the relationships between reading comprehension and its component skills, as well as the interrelationship among the component skills including radical knowledge, character knowledge, morphological knowledge, vocabulary knowledge, and grammar knowledge. In Figure 4.1, we can see that the path from radical knowledge to character knowledge was significant (.91), which indicated that when the participants' radical knowledge increased one standard deviation, their Chinese character knowledge would increase .91 standard deviation. Another path, from morphological knowledge to vocabulary knowledge was also significant (1.05), indicating that when the participants' morphological knowledge increased one standard deviation, their vocabulary knowledge would increase 1.05 standard deviation. We can see that radical knowledge had a strong significant direct effect on character knowledge, and the morphological knowledge had a strong significant direct effect on vocabulary knowledge. However, the direct paths from character knowledge, radical knowledge, grammar knowledge, vocabulary knowledge, and morphological knowledge to reading comprehension were all not significant, indicating a need to re-specify the model. The nonsignificant path may also be due to the present study's small sample size.

Model fit indices are summarized in Table 4.2. The model chi-square is statistically significant at the .01 level, $\chi 2$ (45) = 131.191, p = 0.00, which indicates that the exact-fit hypothesis is rejected, and the data are significantly different from the hypothesized model. Thus, there is a need to diagnose the sources of this failed test. Table 4.2 also reports the values of approximate fit indices. The value of RMSEA is .12, and the close-fit hypothesis is rejected (p = 0.00) based on the value of the lower bound of the 90% confidence interval. The upper bound of the RMSEA's 90% confidence interval .144 is large than 1 so that the poor-fit hypothesis cannot be rejected. The CFI and TLI show that the hypothesized model is not significantly better than a

null model in terms of model-data fit. The relative fit of the model is about a 90% improvement over that of a baseline model (CFL = .906). In sum, the model-fit indices were less than ideal and model re-specification is needed.

Table 4. 2. Model-Fit Indices of the Hypothesized SEM Model

				RMSEA 90% CI			
χ2	*Df*	SRMR	RMSEA	Low	High	CFI	TLI
131.191*	45	0.089	0.12	0.096	0.144	0.906	0.863

* $p = 0.0$

4.2.4 Model re-specification. By examining the correlation of the twelve observed variables in Table 4.3, I find that the correlation between word order test and grammaticality judgement test is .580. At the same time, the correlation between word order test and multiple choice test is .679, and between word order test and cloze test is .690. The medium to high correlations may indicate that word order test might be more closely related to two measures of reading comprehension, than to grammaticality judgment test, one measure of grammar knowledge.

Next, I examined the correlation residuals. Table 4.3 shows a lot of correlation residuals exceeded the absolute value of .10, which indicates that the model did not explain very well the observed correlations among those variables. The residual correlations among cloze test and other variables are extremely high. The highest residual correlation is between cloze test and grammaticality judgment test (14.353). The residual correlation between cloze test and word order test is also high at 10.824. Those two residuals were both positive, which indicates that correlations between cloze test and other variables were underestimated.

Table 4. 3. Correlation Residuals for the Twelve Observed Variables

	1	2	3	4	5	6	7	8	9	10	11	12
RSRKT	-0.001											
RMMT	4.401	0										
LDT	-0.400	0.118	0.001									

CKT	-0.591	-1.794	0.001	0								
RVKT	0.579	-0.867	-0.289	0.505	0							
VST	2.776	-0.962	0.415	1.139	0	0						
MDT	0.571	-0.474	0.513	1.193	0.114	-0.268	0					
CSDT	-0.076	-0.162	0.137	-0.402	0.077	-0.169	0.303	0				
WOT	-1.24	-2.055	0.248	1.263	-0.107	0.186	-0.381	-0.196	0			
GJT	1.288	0.22	1.556	-0.353	0.155	0.944	-1.214	2.038	0	0		
MCT	-1.236	0.285	-0.436	1.323	-0.796	1.122	-0.147	-0.053	-0.087	-1.147	-0.303	
CT	4.674	1.661	7.604	9.562	12.76	9.777	3.797	3.316	10.824	14.353	-0.185	-0.113

Based on the above statistic evidence, the correlations among word order test, grammaticality judgment test, multiple choice test, and cloze test were underestimated. It is highly possible that the four tests were measuring one construct. A principal axis factoring analysis with direct oblimin rotation was conducted to examine the internal structure within the four tests. A PAF explores the structure of a number of variables and intends to locate any underlying latent construct (Mayers, 2013, p. 539). Only one factor had an eigenvalue above 1, thus only one factor was extracted, which indicated that the four tests were measuring one construct. Table 4.4 shows the results of the factor analysis. Figure 4.2 shows the scree plot of the PAF.

Table 4. 4. Factor Loadings of the Principal Axis Factoring Analysis

	Factor matrix
WOT	0.875
CT	0.801
MCT	0.737
GJT	0.690

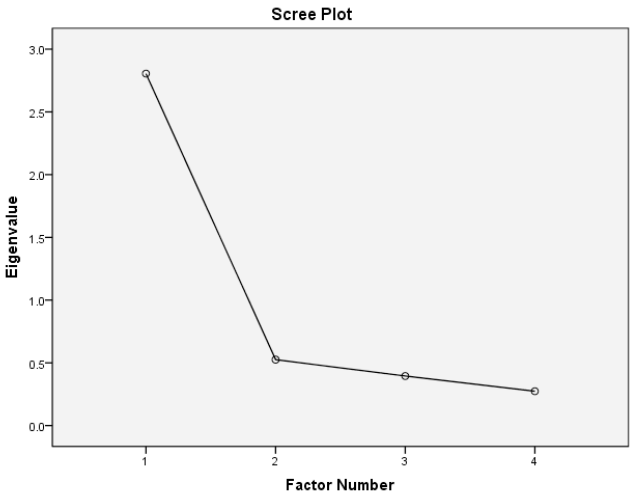


Figure 4. 2. Scree Plot of the PAF

4.1.5 Revised SEM

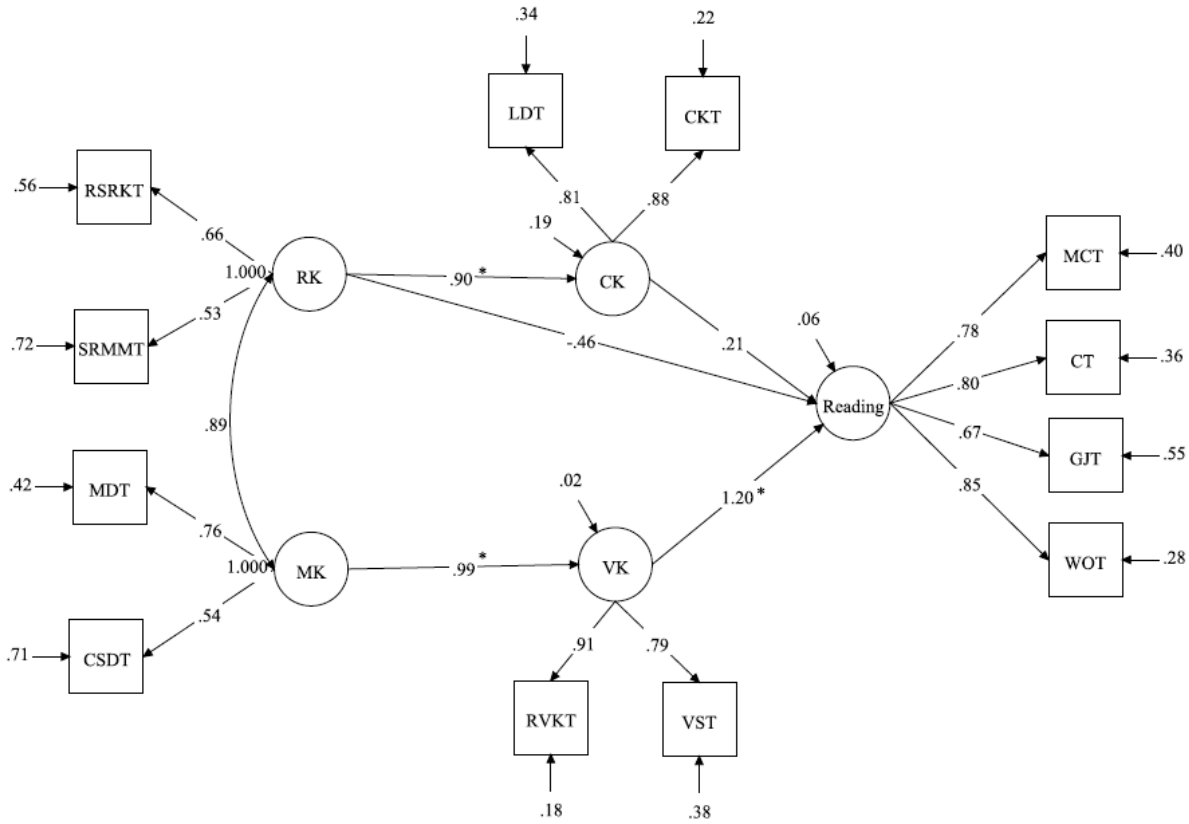


Figure 4. 3. The Revised Model Examining the Effects of Radical Knowledge, Character Knowledge, Vocabulary Knowledge, and Morphological Knowledge on Reading Comprehension Ability.

All path parameters were significant at $p < .05$, except the direct paths from radical knowledge to reading comprehension and from character knowledge to reading comprehension.

4.2.5 Results of parameter estimates and model fit indices for the revised SEM. The magnitude of these estimates was similar to those in the model shown in Figure 4.3. But a key difference between the two models is that in the revised model, reading comprehension ability was measured using four tests, multiple choice test, cloze test, word order test, and grammaticality judgment test. Reading comprehension was well explained by the combination of word order test (.85), cloze test (.80), multiple choice test (.78), and grammaticality judgment test (.67). The revised measurement model of reading comprehension explained 72% (.85*.85) of the variance of the word order test, 45% (.67*.67) of the grammaticality judgment test, 61% (.78*.78) of the multiple choice test, and 64% (.80*.80) of the cloze test.

After adjusting the measurement model of reading comprehension, three paths out of five were statistically significant in the path model, $p < .05$ (Table 4.5). There is a significant direct effect from radical knowledge to character knowledge. The path coefficient .90 indicates that one standard deviation increase in radical knowledge will lead to a 0.9 standard deviation increase in character knowledge. There is also a significant direct effect from morphological knowledge to vocabulary knowledge. The path coefficient of .99 indicates that if participants' morphological knowledge increases one standard deviation, their vocabulary knowledge increases .99 standard deviation. The path coefficient from vocabulary knowledge to reading

comprehension is 1.2, which indicates that one standard deviation increase in vocabulary knowledge will lead to a 1.2 standard deviation increase in reading comprehension.

The direct path from radical knowledge to reading comprehension was not significant. The path coefficient from radical knowledge to reading comprehension was -.46. It seems that even though knowledge of semantic radicals facilitates character recognition, its effect to reading comprehension is limited.

This study also found that character knowledge had a direct effect on reading comprehension, with a path coefficient of .21, however, the direct effect was not statistically significant, which might be due to the limitations imposed by the small sample size and complex natures of Chinese characters.

Table 4. 5. Parameter Estimates of the Revised SEM Model

Parameter	Unstandardized		Standardized	
	Estimate	S.E.	Estimate	*p*
Radical knowledge → RSRKT	1.00	0.00	0.66	0.00
Radical knowledge → SRMMT	0.66	0.12	0.53	0.00
Character knowledge → LDT	1.00	0.00	0.81	0.00
Character knowledge → CKT	1.18	0.11	0.88	0.00
Vocabulary knowledge → RVKT	1.00	0.00	0.91	0.00
Vocabulary knowledge → VST	0.75	0.06	0.79	0.00
Morphological knowledge → MDT	1.00	0.00	0.76	0.00
Morphological knowledge → CSDT	0.58	0.09	0.54	0.00
Reading comprehension → MCT	1.00	0.00	0.78	0.00
Reading comprehension → CT	1.11	0.11	0.80	0.00
Reading comprehension → GJT	0.93	0.12	0.67	0.00
Reading comprehension → WOT	0.88	0.08	0.85	0.00
Radical know. → Character knowledge	1.05	0.16	0.90	0.00
Morphological know. →Vocabulary knowledge	2.08	0.22	0.99	0.00

Radical know. → Reading comprehension	-0.72	0.68	-0.46	0.28
Character know. → Reading comprehension	0.28	0.34	0.21	0.40
Vocabulary know. → Reading comprehension	1.14	0.27	1.20	0.00

Note: Radical know. = Radical knowledge
Character know. = Character knowledge
Vocabulary know. = Vocabulary knowledge
Morphological know. = Morphological knowledge

Besides direct effects, this study also examined the indirect effects of radical knowledge and morphological knowledge to reading comprehension. Table 4.6 shows that there was a significant indirect effect from morphological knowledge to reading comprehension through the mediation of vocabulary knowledge. However, the indirect effect from radical knowledge to reading comprehension was not significant. There were no significant direct or indirect effects from radical knowledge to reading comprehension.

Table 4. 6. Total and Indirect Effects of Morphological Knowledge and Radical Knowledge on Reading Comprehension

		Path coefficient	S.E.	*p*-value
Effects from MK to RC	Indirect	2.379	0.583	0
	Total	2.379	0.583	0
Effects from RK to RC	Indirect	0.297	0.361	0.411
	Total	-0.424	0.438	0.333

According to R^2 value, ninety four percent of the variance in reading comprehension ability was accounted for by radical knowledge, character knowledge, vocabulary knowledge and morphological knowledge.

The model-fit indices in Table 4.7 suggest that the model-fit was improved compared to the original model. The model chi-square $\chi 2$ (42) = 73.2, p = 0.01indicates that the exact-fit hypothesis is rejected, and the data are significantly different from the hypothesized model. However, since chi-square test is very sensitive to sample size, other model fit indices will be

considered. As for approximate fit indices, based on the value of the lower bound of the 90% confidence interval, the value of RMSEA is .03, and the close-fit hypothesis is not rejected. The upper bound of the RMSEA's 90% confidence interval .90 is less than 1 so that the poor-fit hypothesis was rejected. The relative fit of the model is about a 97% improvement (CFI = .973) over that of a baseline model. In sum, the model-fit indices were ideal.

Table 4. 7. Model-Fit Indices of the Revised SEM Model

				RMSEA 90% CI			
χ2	*df*	SRMR	RMSEA	Low	High	CFI	TFI
73.2*	42	0.042	0.063	0.031	0.090	0.973	0.962

Note: * $p = 0.01$

4.3 RQ 2: ***Which component skill can best distinguish high- skilled, middle- skilled, and low-skilled readers in L2 Chinese reading?***

Discriminant functionl analysis can be used to predict group membership based on a number of predictors (Brown, Roboson, & Rosenkjar, 2001). Discriminant functional analysis and multivariate analysis of variance (MANOVA) are related but different. In MANOVA, the group membership is the independent variable and a set of test scores (as in this study) are dependent variables. The purpose of MANOVA is to examine how two or more groups perform differently on a number of variables. In contrast, in discriminant analysis, the group membership is the dependent variable and a set of test scores are independent variables. The goal is to analyze the degree to which the combination of a set of predicting variables predict group membership. In this study, a discriminant analysis was conducted to predict whether readers were high-skilled, middle-skilled, or low-skilled readers based on eight predicting variables.

The participants were divided into three groups according to their total score on reading comprehension. After adding all the scores on multiple-choice test, cloze test, word-order test, and grammaticality judgment test, a total score of reading comprehension was formed. The

participants were divided into three groups by dividing the total scores into three halves. The high-skilled reader group had 45 participants, middle-skilled reader 44 participants, and the low-skilled reader group 45 participants (Table 4.10). Predictor variables were receptive semantic radical knowledge test score, radical meaning matching test score, lexical decision test score, character knowledge test score, receptive vocabulary knowledge test score, vocabulary synonym test score, morpheme discrimination test score, and compound structure discrimination test score.

Since some of the assumptions of the discriminant analysis were similar to those of SEM, Chapter 3 reported that the data had met the assumptions of SEM such as normality, multicollinearity, outliers, and so on. Another assumption, the homogeneity of covariance matrix, needs to be checked using Log of determinants and Box's M. Table 4.8 shows that the Box's M value of 160.477 was associated with a *p* value of .000, which was interpreted as significant based on Huberty and Petoskey's (2000) guideline (i.e., $p < .005$). However, given the sample size, this result was not regarded as serious. Table 4.9 shows the log of determinants values for two groups were roughly equal, which indicates that a discriminant analysis was appropriate.

Table 4. 8. Box's M Test Results of the Discriminant Analysis

Box's M		160.477
F. Approx.	Approx.	2.035
	df1	72
	df2	47775.472
	Sig.	.000

Table 4. 9. Log Determinants of the Discriminant Analysis

Group	Rank	Log Determinant
Low-skilled readers	8	14.573
Middle-skilled readers	8	17.097
High-skilled readers	8	19.997
Pooled within-groups	8	18.448

Table 4.10 shows the high-skilled, middle-skilled, and low-skilled readers differed in the mean scores of each predictor variable. In general, the high-skilled reader group had the highest means on all eight predictor variables. For example, the high-skilled reader group had a mean of 21 (*SD* = 3.384) on the receptive vocabulary knowledge test, which was higher than 16.73 (*SD* = 4.416) of the middle-skilled reader group and 11.04 (*SD* = 4.436) of the low-skilled reader group. Similarly, the high-skilled reader group (*M* = 21.09, *SD* = 3.377), the middle-skilled reader group (*M* = 17.91, *SD* = 3.262), and the low-skilled reader group (*M* = 13.71, *SD* = 4.948) had big mean differences in vocabulary synonym test. The mean differences in the two tests suggest that those might be good discriminators since the separations were large. Table 4.11 provides strong statistical evidence of significant differences between means of high-skilled, middle-skilled, and low-skilled reader groups for all eight predictors with receptive vocabulary knowledge test and vocabulary synonym test producing very high *F* values.

Table 4. 10. Descriptive Statistics of the Discriminant Analysis

Predictors	High-skilled *n* = 45		Middle-skilled *n* = 44		Low-skilled *n* = 45		Total	
	Mean	SD	*Mean*	SD	*Mean*	SD	*Mean*	SD
RSRKT	16.20	3.757	13.57	4.321	10.8	4.939	13.52	4.869
SRMMT	14.42	3.434	13.23	3.536	11	4.275	12.88	4.004
LDT	32.20	1.841	30.14	3.152	27.56	5.856	29.96	4.398
CKT	22.64	2.87	20.59	3.737	16.38	5.69	19.87	4.985
RVKT	21.00	3.384	16.73	4.416	11.04	4.436	16.25	5.787
VST	21.09	3.377	17.91	3.262	13.71	4.948	17.57	4.958
MDT	11.58	2.572	9.77	2.884	7.02	2.624	9.46	3.274
CSDT	6.60	2.58	5.36	2.242	3.76	2.404	5.24	2.667

Note. RSRKT = receptive semantic radical knowledge test; SRMMT = semantic radical meaning matching test; LDT = lexical decision test; CKT = character knowledge test; RVKT = receptive vocabulary knowledge test; VST = vocabulary synonym test; MDT = morpheme discrimination test; CSDT = compound structure discrimination test.

Table 4. 11. Tests of Equality of Group Means of the Discriminant Analysis

	Wilks' Lambda	*F*	df1	df2	Sig.

RSRKT	.792	17.213	2	131	.000
SRMMT	.873	9.553	2	131	.000
LDT	.811	15.305	2	131	.000
CKT	.722	25.186	2	131	.000
RVKT	.496	66.570	2	131	.000
VST	.623	39.636	2	131	.000
MDT	.668	32.592	2	131	.000
CSDT	.807	15.709	2	131	.000

Note. RSRKT = receptive semantic radical knowledge test; SRMMT = semantic radical meaning matching test; LDT = lexical decision test; CKT = character knowledge test; RVKT = receptive vocabulary knowledge test; VST = vocabulary synonym test; MDT = morpheme discrimination test; CSDT = compound structure discrimination test.

Table 4.12 presents that the first function can significantly predict reading ability group membership (p = .000) while the second function does not (p = .929). Since the second function is not sifnificant, I will only discuss the first function. The canonical correlation of the first function was .744, which indicated that around 55.35% (.744*.744) of the variance in the group membership was explained by this function. Wilk's Lamda .438 showed that around 43.8% of the variance was left unexplained by the current model. The plot in Figure 4.4 illustrated how both functions predict group membership. The first function (on the *X* axis) adequately seperates the three groups from each other while the second function did not separate the three groups.

Table 4. 12. Prediction Model of the Discriminant Analysis

Function	Eigenvalue	Canonical correlation	Wilk's Lamda	Chi-square	Df	Sig.
1	1.237	0.744	0.438	105.14	16	0
2	.020	0.139	0.981	2.47	7	.929

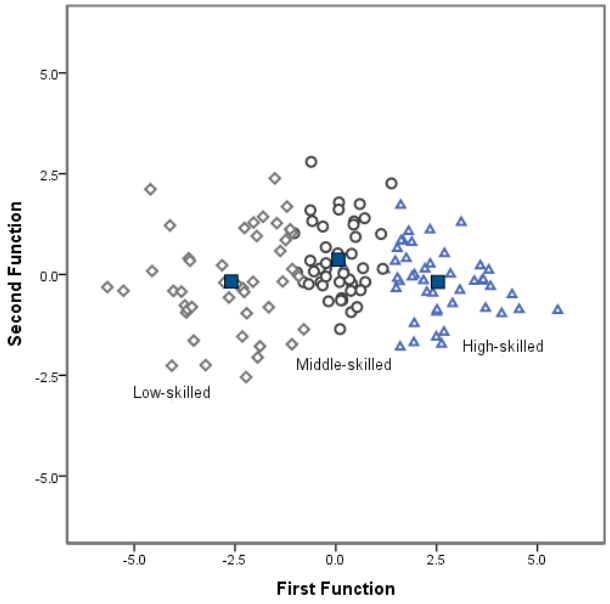


Figure 4. 4. Plot of the Three Group Centroids on Two Discriminant Functions Derived from Eight Independent Variables.

The discriminant coefficients in Table 4.13 provide the relative importance of the predictors in distinguishing the three group readers. We can see that receptive vocabulary knowledge test (.575) and vocabulary synonym test (.326) were the two strongest predictors of the group membership. This indicates that if participants score high on those two tests, there is a high possibility that they are high-skilled readers. Lexical decision test (-.046) and character knowledge test (.014) were the two predictors with least predicting power.

Table 4. 13. Discriminant Coefficients of the Discriminant Analysis

	Function 1
Receptive semantic radical knowledge test	.154
Semantic radical meaning matching test	.075
Lexical decision test	-.046
Character knowledge test	.014
Receptive vocabulary knowledge test	.575
Vocabulary knowledge synonym test	.326
Morpheme discrimination test	.149
Compound structure discrimination test	.164

The classification results in Table 4.14 reveal that overall, 61.9% of the respondents were classified correctly into the three reading proficiency groups. However, the accuracy of the prediction varied for the three levels. High-skilled readers were classified correctly with 78% accuracy and low-skilled readers were correctly classified with 68.9% accuracy, while middle-skilled readers were only correctly classified with 38.6% accuracy. Thus, the model can better predict high-and low-skilled readers than middle-skilled readers.

Table 4. 14. Classification Results of the Discriminant Analysis

		Predicted group membership		
Actual group	*N*	High	Middle	Low
High-sklled		**35**	10	0
	45	**78%**	22.20%	0%
Middle-skilled		14	**17**	13
	44	32%	**38.60%**	29.50%
Low-skilled		1	13	**31**
	45	2%	28.90%	**68.90%**

Note: *61.9% of original grouped cases correctly classified*

4.4 RQ3: ***Based on the interview and focus group data, what do students report about L2 Chinese reading?***

Altogether, seventeen interviews were conducted. Among them, thirteen were one-on-one interview between the researcher and the interviewee, four were focus group interviews. Three focus group interviews had two participants and the researcher as the facilitator; one focus group had six participants and the researcher as the facilitator. The interviews were conducted in Chinese or English. Before the interview, the researcher asked the participants which language they would prefer to speak in the interview. Fourteen interviews were conducted in Chinese and

two were conducted in English. One interview was conducted first in Chinese and later the interviewee chose to continue in English. Altogether, the researcher collected 263 minutes of interview data.

During the interview and the focus group, the interviewees were asked four main questions: what they think is important in reading in Chinese, whether reading in Chinese is easy or difficult and why, what strategies they use to deal with unknown characters, and what they have done to improve their Chinese reading. In the end of the interviews, I also asked whether the interviewees had anything else that they would like to share about reading in Chinese. The interview data were transcribed and analyzed using Nvivo for mac. In the next four sections, the frequencies of the themes for each interview question are reported. Interview excerpts are provided as examples.

4.4.1 Important components in Chinese reading. When asked about what was important in learning to read in Chinese, the interviewees reported that Chinese characters, understanding the meaning of what they were reading, and words were the most important in learning to read in Chinese (Table 4.15). The interviewees also mentioned grammar, radicals, tones of Chinese characters, patience, reading more, morphological structure of the words, and being able to translate into their L1.

Table 4. 15. Interviewees' Perceptions of What is Important in L2 Chinese Reading

	Frequency	Percentage
Characters	4	21.1%
Understanding the meaning	4	21.1%
Words	3	15.8%
Grammar	2	10.5%
Radicals	1	5.3%
Morphological structure	1	5.3%
Tones	1	5.3%
L1 translation	1	5.3%
Patience	1	5.3%

Reading more	1	5.3%

The two focus group participants in Excerpt 4.1 were from South Korea. Both of them agreed on the importance of knowing Chinese characters.

Excerpt 4. 1. The importance of Chinese characters

(English translation)

IR: It is ok. What do you think reading in Chinese, reading Chinese articles, and others, what do you think is important?
IE1: Chinese characters.
IE2: The meaning of Chinese characters.
IE1: Of course, it is characters.
IR: Oh.
IE1: But teacher, do you know that in South Korea it is traditional characters, in China it is simplified characters.
IR: So?
IE1: So we need to learn simplified Chinese characters.
IE1&2: Hahaha.
IE1: Characters are the most important.

(Chinese original)

IR: 没事，那你觉得阅读中文，读中文的文章啊，什么的，你觉得什么比较重要?
IE1: 汉字。
IE2:汉字的意思。
IE1: 当然汉字呀！
IR: 啊。
IE1: 但是老师你知道吗我们韩国是繁体字，中国是简体字。
IR: 所以呢？
IE1: 所以我们要了解简体字呀 ！
IE1&2: 哈哈哈 。
IE1: 汉字最重要。

In Excerpt 4.2, the interviewee thought that understanding the meaning of what was read was the most important.

Excerpt 4. 2. The importance of understanding the meaning

(English translation)

IR: Good, good, ok, good, good, what do you think is important in reading in Chinese, reading?
IE: I think when I am reading, I think what is important is to find out when, and where, for example, when I read the passages in the textbook, I look at when that thing happens, where, and how many people are involved, that is how I read.
IR: Uh.
IE: Because for example when I take Chinese proficiency test, I don't have time to read everything, so I have to finish the comprehension questions according to the content of the passages.
IR: Not necessarily in exams. What do you think is important when you have Chinese classes or when you read Chinse?
IE: When I read for myself, when I read some books, I spend a lot of time to read, because I want to read slowly, I want to understand better, what is most important is to understand the meaning.
IR: Understand the meaning.

(Chinese original)

IR: 挺好挺好, 行，好的好的,你觉得在中文阅读的时候，读中文的时候，什么是特别重要的?
IE: 我觉得我在读中文的时候，我觉得重要的就是什么时候什么地方，比方说在课文里面读的时候我就看一下什么时候发生那件事情，在哪里，有几个人在里面，我就是这样读的
IR: 哦。
IE: 因为比方说在汉语水平考试的时候，没有时间要全部读，所以我就要按照文章的内容，很快做完我的阅读题目。
IR: 那你平时不一定是考试的时候，那你平时上中文的时候，或者平时读中文的时候，你觉得什么是特别重要的？
IE: 我自己读的时候，我自己在读一些书的时候，我花很长时间要读，因为我要慢慢读，要更明白的，就是最重要的是就是要知道要明白它的意思。
IR: 明白它的意思。

In Excerpt 4.3, the four participants all agreed that knowing Chinese words is very important in reading in Chinese. Since some Chinese words are composed of one character, I confirmed that what they meant was words, not characters.

Excerpt 4. 3. The importance of words

(English translation)

IR: Next question is when you read Chinese, read Chinese, what is very important?
IE1: I think it is words.
IE all: Uh.
IE2: I also think it is words.
IE3: I think words.

IE4: I also think it is words, but when I ask others, how to read, quickly, they say, their way is to read the questions first, and then they look for important words.
IR: Uh.
IE3: But if we don't understand words, we don't understand what the reading is about.
IE4: We first look up the dictionary, what are the meanings of the words, then we work on the assignment.
IR: Oh, so do you mean words or characters?
IE3: Characters are words.
IE all: Hahaha.
IR: Ok, because in Chinese, sometimes one character is one word, sometimes two characters are one word.
IE2: It is, it is the meaning of the character, we know, recognize, and understand its meaning, maybe one, two, three (characters).
IE3: So is it character or words?
IE all: Words.
IR: Not characters, words.
IE all: Words.

(Chinese original)

IR:下一个问题就是你们觉得读中文的时候，阅读中文的时候，什么是非常重要的？
IE1: 我觉得是生词。
IE all: 嗯 。
IE1: 我也觉得是生词。
IE2: 我觉得是生词 。
IE3: 我也觉得是生词，但是如果我问他们的时候，怎么可以做阅读，很快的，他们说，他们有一个办法是先看问题，然后他们找重要的词，词语。
IR:嗯 。
IE3: 但是如果是我们的不明白生词，不知道阅读它们写什么。
IE4: 我们先查词典，生词有什么意思，然后做作业 。
IR:哦，所以就是生词还是汉字？
IE3: 汉字就是生词。
IE all: 哈哈哈。
IR:对，因为中文的那个，有的时候一个汉字是一个词，有的时候两个汉字是一个词。
IE2: 就是，就是汉字的意思，一个一个我们明白，我们认识，明白它的意思，可能是一个，两个，三个。
IE3: 就是汉字还是生词？
IE all: 生词。
IR:不是汉字，是生词 。
IE all: 是生词。

In Excerpt 4.4, the interviewee mentioned both the importance of morphological knowledge and radicals. He hoped that he had learned radicals earlier so that he could guess the meaning of unknown characters in reading. He also thought that knowing how words were formed was important. The majority of Chinese words were formed by two characters. Some words that share one character and differ in another character can either be very similar or very different in meaning.

Excerpt 4. 4. The importance of radicals and word structures

IR: Oh, that is why. What do you think is very important in learning to read in Chinese?
IE: Learning to read?
IR: Yeah, not reading aloud, but to read
IE: Ok, when I first started I thought the most important thing is learning the words and learning how the sentence structured, and later I realized, that just also have a grasp of the words, how the words were formed, radicals, I did not learn radicals when I first started, I learned radicals last year, and I think I should have learned that when I FIRST started.
IR: Why?
IR: Because I think it would help like when in the test, I read Chinese books when I can, I just guess, I don't know every word, I think you can guess.
IR: Uh, uh.
IE: And I think I should have learned radicals.
IR: Uh, uh.
IE: But I think the vocabulary in Chinese is really hard.
IR: Why, why it is hard?
IE: Uh, just I feel like there are a lot of words that mean similar things, many words mean the same thing.
IR: Like synonyms.
IE: Yes.
IR: Can you give me an example?
IE: On the test, you have 焦虑, another one there, almost have the same characters, like 焦急, and the other one is, I have never actually learned 焦急, I have learned 焦虑.
IR: Uh.
IE: So, reading those I am not sure if they are similar.
IR: Uh.
IE: I found those kinds of things confusing, because sometimes they can be every different even if they have the same character.
IR: Yeah, so like you mean that in Chinese words, if they are composed of two characters, one character is the same, and
IE: The other one is different.
IR: Yeah, and then?

IE: The meaning could be same, or very different.

To conclude, interview question # 1 asked interviewees what they think is important in Chinese reading. The interviewees identified ten components that are important in L2 Chinese reading: characters, understanding the meaning of the reading, words, grammar, radicals, morphological structure, tones, L1 translation, patience and reading more.

4.4.2 Reading in Chinese is easy or difficult. The second interview question asked the interviewees whether they think reading Chinese is easy or difficult and the reasons. Table 4.16 reveals that in ten interviews (59%), the participants agreed that reading in Chinese was difficult or hard. Interviewees in four interviews mentioned that reading in Chinese was easy, and interviewees in three interviews stated that it would depend on what they were reading or when they were reading.

Table 4. 16. Reading in Chinese is Easy or Difficult

	Frequency	Percentage
Difficult	10	59%
Easy	4	23%
It depends	3	18%

In Excerpt 4.5, the two focus group participants both agreed that reading in Chinese was difficult. For the first participant, reading in Chinese was difficult because the participant's L1 has letters and this participant was not familiar with Chinese characters. Chinese characters were also what made reading in Chinese difficult for the second participant. Many Chinese characters look very similar, differing maybe in one or two strokes. This might cause difficulty for language learners.

Excerpt 4. 5. Reading in Chinese was difficult-Chinese orthography

(English translation)

IR: I understood now, right, right, right, do you think reading in Chinese is easy? Is it difficult?

IE2: I feel it is still difficult, because even though this is my fourth year learning Chinse, some characters look so similar, so if I am reading while thinking other things, because I am too busy, I will make mistakes, because I think this character is another character, but, if I read again, I find it is not.
IR: Oh.
IE2: It is because I read too fast, so I read fast, so
IE1: I feel very difficult, there are no Chinese characters in my native language. We have letters, so I am not familiar with characters. If it is for Korean or Japanese people, reading maybe is relatively easy for them, but for me, it is not easy.
IR: You think it is pretty difficult, right?
IE1: Yes.

(Chinese original)

IR: 差不多明白了，对对对，那那个你们觉得中文的阅读简单还是容易？难不难？
IE2:我觉得还是有一点难，因为虽然这是我的第四年在学中文，但是有的汉字太像，所以如果我在读，但是我在想别的事情，因为我太忙，我就会读错，就是因为我把那个汉字以为是另外一个汉字，但是，如果再读的话发现不是这个样子。
IR: 噢。
IE2: 是因为我读得太快，所以我就快了, 就
IE1: 我觉得很难，我们的母语没有汉字，有字母，所以我不太熟悉汉字，如果是韩国人日本人，那阅读可能对我来说比较容易，但是对我来说不太容易。
IR: 你觉得还是挺难的，是吧？
IE1: 是的。

Some Chinese characters have two or more pronunciations and meanings. For example in Excerpt 4.6, the character 还 the interviewee mentioned has two pronunciations, huán and hái. When it is pronounced huán, it means “to return”, and when it is pronounced hái, it means “also”. The interviewee found that characters like 还 caused reading difficulty for him when he did not know whether it is huán or hái in a certain context.

Excerpt 4. 6. Reading Chinese is difficult-Chinese pronunciation

IR: Very good, do you think reading in Chinese is easy or difficult?
IE: I think reading in Chinese is I won’t say very easy, neither will I say difficult, but I will say it is very challenging, because I have noticed that the same character can have different pronunciations depending on the context, the linguistic context of the character, for example, the character 还(huán), and 还(hái), it is written in the same way, 我还没来了, 还没，还，written

in the same way, in certain context, it is pronounced hái, in other contexts, it is pronounced huán, I want to give back, 我要还那个, 那本书.
IR: 还书
IE:还书, so 还 (huán) and 还(hái), and that is just one example, we have many more examples in Chinese characters, one character which has more than one pronunciation according to the context.
IR: Yeah.
IE: that is what I think challenges us most.
IR: Ok, that is what makes reading in Chinese difficult.
IE: Exactly.

In Chinese, there are a large number of idioms, which are usually composed of four Chinese characters. The meaning of the idioms sometimes cannot be deciphered from individual characters. As mentioned in Excerpt 4.7, the interviewee stated that if a reader did not know the meaning of the idiom, it would cause difficulty in understanding the meaning of the passage.

Excerpt 4. 7. Reading Chinese is difficult- Idioms

(English translation)

IR: Ok, ok, ok, you need to understand its meaning. Do you think reading in Chinese is difficult or easy?
IE: I feel it is difficult.
IR: What makes you think it is difficult?
IE: For example, to understand Chinese Characters, since some of them are very difficult, for example when you read, you encounter some idioms. If you don't understand the meaning of the idioms before, you would not be able to understand the meaning of the passage.
IR: Oh, you think it is because of idioms.
IE: Idioms, some idioms are there.

(Chinese original)

IR: 好好好, 要读明白它的意思啊, 你觉得读中文难还是简单?
IE: 我觉得比较难。
IR: 你觉得是什么让它比较难？
IE: 比方说汉字要懂的话，因为有些汉字特别难，比方说在读的时候遇到一些成语，如果你本来不知道那些成语的意思的话，不会明白那个课文的内容。
IR: 啊, 成语你觉得是。
IE: 成语, 有些成语在里面。

In Excerpt 4.8, the interviewee stated that reading in Chinese was difficult, but not as difficult as when he first started. He provided a very insightful explanation about the relationship between characters and words. Knowing characters doesn't mean that a reader can understand the words that are composed of the characters. However, knowing characters makes learning Chinese words easier. As the interviewee mentioned, learning Chinese words is a multiple-step process.

Excerpt 4. 8. Reading in Chinese is difficult-Characters and words

IR: So you think that part is difficult. Do you think reading in Chinese is easy or difficult?
IE: I guess difficult.
IR: And what do you think makes it difficult?
IE: Let me clarify this, reading in any language is difficult.
IR: Yeah.
IE: And then for Chinese specifically because, I think it depends, when I first started, I think it was difficult because if I want to read something, there are so many characters that I did not know. And in order to learn the word, you need to learn a couple of characters.
IR: Uh.
IE: Whereas now if I read something I don't feel as that bad because I learned even if I don't know the word, I know the characters.
IR: Oh.
IE: So then learning the new words is a lot easier now.
IR: Uh.
IE: So at first I feel that learning new words is **like a multiple-step process.**
IR: Yeah, yeah, yeah.
IE: It was not just like in English, I feel like learning a new word in English is just oh the new word.
IR: A new word.
IE: But in Chinese, oh, it is new characters, then new words, maybe Chinese characters have multiple meanings.
IR: Yeah.
IE: And I think that was very confusing.

For the interviewee in Excerpt 4.9, reading in Chinese was easy for him because he knew many characters. Also in the interview, the interviewee mentioned that he read a lot of Chinese kids books and on Chinese websites.

Excerpt 4. 9. Reading in Chinese is easy

(English translation)

IR: Ok, very good, do you think reading in Chinese is difficult, difficult or easy?
IE: For me, reading in Chinese is the easiest.
IR: It is the easiest for you, why?
IE: Because my my, memory is so good.
IR: Hahaha.
IE: I remember a lot of characters, but for me, speaking is the most difficult.
IR: Oh, good. Do you think reading in Chinese is easy because you know many characters?
IE: Uh.

(Chinese original)

IR: 嗯, 非常好, 那你觉得中文阅读难不难, 难还是简单？
IE: 对我来说, 中文阅读是最简单的。
IR: 对你来讲是最简单的, 为什么？
IE: 因为我的忆, 记忆, 太好了。
IR: 哈哈。
IE: 我记得很多汉字，但是对我来说口语是最难的。
IR: 哦, 对, 所以你觉得中文阅读容易是因为你认识很多汉字？
IE: 嗯。

The interviewee in Excerpt 4.10 came from North Korea and had stayed in China for over 11 years. For him, reading in Chinese was not that difficult. His L1 Korean shares a lot of similarities with Chinese. According to this interviewee, word structures in two languages are similar. The pronunciation of the Korean words resembles that of the Chinese counterparts.

Excerpt 4. 10. Reading in Chinese is easy- The facilitation of L1

(English translation)

IR: Right, right, it is different from speaking, ok. Do you think, do you think, reading in Chinese, reading in Chinese is difficult or easy? If it is difficult, why, if it is easy, why?
IE: Now I don’t think reading in Chinese is difficult.
IR: Right, right, right.
IE: Uh.
IR: It is easy, why?
IE: I have stayed here for a long time, including this year, almost six years, and also, what I study, uh, when I was in college, I stayed here for five years, I am also not that young.
IR: Right, right, right.

IE: Anyway, my speaking, maybe is better than others.
IR: Better than others.
IE: Pronunciation, some of my friends, quite a few of them, they studied abroad with me in Beijing.
IR: Right.
IE: Some of them their speaking is not that good.
IR: Oh, right.
IE: You can tell immediately that they are foreigners.
IR: So one reason is you have stayed in Beijing for a long time.
IE: A long time.
IR: Then do you read more, or do you think that reading in Chinese is easy in nature?
IE: No, no, not easy, relatively speaking, for Koreans, it is, uh, relatively easy to learn.
IR: You think it is relatively easy, why?
IE: The two languages, no matter in semantics, or structures, have a lot in common.
IR: Oh.
IE: Our country is one of the countries that used Chinese characters before.
IR: Right, right.
IE: So a lot of words are composed of Chinese characters.
IR: But now in Korean there are no characters, right?
IE: Korean is a letter language.
IR: Right.
IE: If you spell it, you can read it.
IR: Right, right.
IE: But the original meaning is from Chinese.
IR: Right, right, uh, uh.
IE: Some of them only differ in pronunciation.
IR: Uh.
IE: Structures (of the words), two characters, four characters, are all the same.
IR: Oh, so the only difference is in pronunciation.
IE: The pronunciation is very similar to that of southern China, the pronunciation of Korean is similar to that of southern China.
IR: Oh, right.
IE: Cantonese or others.
IR: Oh, now I understood.
IE: Uh, right.
IR: Then how about grammatical structure, are they also similar?
IE: Quite similar.

(Chinese original)

IR: 是的是的, 跟口语不太一样。嗯, 行, 那你觉得, 你觉得, 读中文, 读中文难还是容易, 如果难是为什么, 如果容易是为什么？
IE: 现在我读中文不是那么费劲儿。
IR: 对对对。
IE: 嗯。
IR: 比较容易，那你觉得为什么？

IE: 反正我待的时间也不短, 包括今年, 就快六年了嘛, 而且我学的, 那个, 上大学的时候来这儿待了五年, 基本上年龄上也不是那么晚。
IR: 对对对。
IE: 反正我口头上, 可能比别人还好点儿吧。
IR: 比别人好点啊 。
IE: 发音啊, 有的我的朋友, 也是好几个, 那时候跟我一起在北京, 留过学的
IR: 对。
IE: 有的他们的口语也不算那么好。
IR: 哦, 对对对。
IE: 一听就是外国人, 一听就是外国人这样的感觉。
IR: 那一个就是你在北京待的时间长。
IE: 长了。
IR: 那你觉得你平时读得很多吗, 还是中文本来比较简单？
IE: 不是, 不是简单的, 相对来说对朝鲜人来说, 还是, 嗯, 比较好学的。
IR: 你觉得比较好学, 为什么？
IE: 这个语言那个, 这个, 不管是在那个语义上, 还是结构上, 有很多相同之处。
IR: 哦。
IE: 我们以前也是用汉字的国家嘛。
IR: 是的是的。
IE: 所以很多单词都是汉字构成的。
IR: 但是你们现在韩语当中是没有汉字的, 对吧？
IE: 朝语是字母语言嘛。
IR: 对。
IE: 拼出来就可以念出来。
IR: 是的是的。
IE: 但是它原来的意思就是从汉字过来的。
IR : 对的, 对的, 嗯嗯嗯。
IE: 有的就是发音不一样。
IR: 嗯。
IE: 结构，两个字两个字, 四个字四个字的结构, 都是一样的。
IR: 啊, 就是发音不太一样。
IE: 发音就是跟南方的口音很相似, 朝语跟中国南方的发音很相似。
IR: 啊, 对。
IE: 粤语呀什么的。
IR: 哦, 原来是这样的。
IE: 嗯, 对。
IR: 然后句子的语法结构也比较相似吗？
IE: 比较相似。

For the interviewee in Excerpt 4.11, whether reading in Chinese was easy or difficult depended on what he/she was reading. An easy reading passage would not cause much difficulty whereas a difficult one with many complicated characters might be very challenging.

Excerpt 4. 11. Reading in Chinese is easy or difficult- It depends

(English translation)

IR: Oh, you read everyday, ok, ok. Do you think reading in Chinese is easy or difficult?
IE: Not that difficult, also not very easy, I feel that some articles, I can read, very easy, but another passage I completely can't read, because there are a lot of complicated Chinese characters.
IR: Oh.
IE: So at that time, I, what is the main idea? I think by myself, and the meaning of the character, I try to guess.

(Chinese original)

IR: 噢, 每天会读, 好的好的, 你觉得读中文难还是简单?
IE: 不是那么难, 也不是很简单, 我觉得有的课文, 我可以读, 很容易的, 但是另外一个课文我完全不会读, 因为有很多复杂的汉字。
IR: 噢。
IE: 所以那时候我自己大概的意思是什么我自己想一想, 这个汉字我猜一猜。

To summarize, interview question # 2 asked the interviewees whether reading in Chinese was easy or difficult. In three interviews (23%), interviewees agreed that reading in Chinese was easy while in ten interviews (59%), reading in Chinese was difficult due to features of characters, idioms, and so on. However, with practice, L2 Chinese reading becomes easier for some interviewees.

4.4.3 Strategies for unknown characters. When asking how the participants deal with unknown characters in reading, I found that a lot of them used dictionaries (Table 4.17). However, when the using of a dictionary was not allowed, for example, during an exam, the interviewees tried to guess the meaning of the unknown characters either from context, using

their L1 knowledge, or using their radical knowledge. Some interviewees also used different strategies for unknown characters, for example, when it was a high-frequency character, they would look up the character. Otherwise, they would ignore it.

Table 4. 17. Strategies for Unknown Characters

		Frequency	Percentage
Use dictionary		8	38%
Guess	Context	7	33%
	L1	1	5%
	Radicals	3	14%
It depends		2	10%

In Excerpt 4.12, the interviewee said he always referred to the dictionary when there was an unknown character.

Excerpt 4. 12. Use dictionary

IR: So while reading in Chinese, if there are characters you don't know, what would you do?
IE: So usually in the classroom context when I am reading and I come across characters which I don't recognize, I stop and always refer back to my dictionary.
IR: Always.
IE: Always.
IR: Always.
IE: Yes, I might have a passage to read, as soon as I come across a character which I am not able to identify, I refer to the dictionary.

In Excerpt 4.13, the two focus group participants also looked up unknown characters in their dictionary. Both participants immediately looked up the unknown characters either online or in a paper dictionary. Both participants also guessed the meaning of the unknown characters from the context.

Excerpt 4. 13. Use dictionary- How to look up

(English translation)

IR: Uh, for example, when you are reading and there are unknown characters, what do you do?
IE1: Immediately look it up in the dictionary.

IR: How about you?
IE2: Me too, now I use handwriting (to look up the characters on a dictionary on the phone)
IR: How about before?
IE2: Look it up in a book dictionary, Xin Hua Dictionary.
IR: Oh, look up, do you use pinyin or components to look up?
IE1: Components.
IE2: If I don't know the character, I use components; if I know the character, I use Pinyin
IR: Oh, right, right, right, so you look up the character immediately. Do you guess the meaning sometimes?
IE2: Guess? Yes.
IR: How do you guess?
IE2: Just see what the characters are related to, like the person radical.
IR: Guess in this way, do you often guess (in this way) or?
IE2: Sometimes look at the characters before and after and guess.
IR: You guess from the characters before and after?
IE1: Sometimes.

(Chinese original)

IR: 那那个, 比如说你读中文的时候有不认识的字, 你怎么办?
IE1: 马上查字典。
IR: 那你呢？
IE2: 我也是, 现在或者手写。
IR: 那原来呢?
IE2: 书的字典查, 新华字典。
IR: 哦, 查, 那你们查是拼音查还是笔画查？
IE1: 笔画。
IE2: 不认识的字就笔画查, 认识的话写拼音。
IR: 哦, 对对对, 那你们会立刻查字典, 会不会去猜一下它的意思？
IE2: 猜？ 会 。
IR: 那你们怎么猜？
IE1: 就看它们和什么有关系, 单人旁这样子的。
IR: 就这样猜吗, 你们经常猜还是？
IE1: 有的时候前面后面的字有什么关系的就猜。
IR: 你通过前面和后面的字猜吗？
IE1:有的时候。

The interviewee in Excerpt 4.14 used a paid version of an online dictionary Pleco that he downloaded on his phone. The interviewee sometimes took a picture of the text he needed to read. If there were unknown characters, he could click the character, and the Pleco would show him the meaning of the character.

Excerpt 4. 14. Using the dictionary –Pleco

IR: Yeah, yeah, yeah, smart, ok, very good, so while reading in Chinese, actually you have already talked about this, what do you do if there are characters you don't know?
IE: To be honest, I rely very heavily on the dictionary.
IR: Yeah, ok.
IE: Like, you know Pleco?
IR: Uh, I think so.
IE: Pleco is the most common dictionary used by like English speakers.
IR: Yeah.
IE: But I paid, on my Pleco, I actually paid for a secondary option which allows me to take pictures of my textbook and then I just
IR: Translate everything?
IE: Not really, do you mind me showing you?
IR: No, sure, thanks.
IE: Ok, I think it is a good app, but I think on the iPhone it is a little bit different.
IR: Oh.
IE: Here, this is a page I took of my textbook, sorry, my phone is really not that good, so I enlarge, and when I read, if I don' t know a word, such as 落后, I just hit it and it gave me that (the definition and Pinyin).
IR: Wow, that is amazing, can I take a picture of your screen?

The interviewee in Excerpt 4.15 tried to guess the meaning of the unknown characters. He guessed the meaning of the unknown character based on the meaning of the characters before and after it. However, he found that his chances of correct guess were not very high. That is why he would like to refer to the dictionary even though he tried to guess first.

Excerpt 4. 15. Guessing the meaning from context

IR: So are there some situations that you try to guess, not referring to dictionaries?
IE: Yes, most often, especially when a character seems somehow familiar, I try to guess. according to the linguistic environment, I look at the words which are aside, and I try to guess what could be the meaning of this character in this particular context.
IR: Uh, uh, do you always have correct guesses?
IE: Not exactly, because I have noticed that if I want to estimate, I would say that in 65% of the chances I am not correct.
IR: Not correct.
IE: Yes, 65% of the times, my guess is not right, that is why I think it is very important for me to check the dictionary.

Similar to the interviewee in Excerpt 4.15, the interviewee in Excerpt 4.16 also tried to guess the meaning of the unknown characters before looking it up in the dictionary. However, this interviewee guessed the meaning from a larger context, that is, the meaning of the whole paragraph or the whole passage.

Excerpt 4. 16. Guessing the meaning from context

(English translation)

IR: Good, very good. what do you do if there are characters that you don't know while reading in Chinese?
IE: Uh, I did not look it up in the dictionary immediately.
IR: Uh.
IE: First I try to guess what the meaning is. After I finish reading the paragraph, if I could not guess, I will look it up in the dictionary.
IR: Uh, uh.
IE: But usually after I look it up in the dictionary, I found that the meaning I guessed was correct
IR: Oh, you are so good. How did you guess?
IE: Just, just, I don't know how to say this, just according to the general meaning of the passage
IR: Oh, right, right, right, and then to guess the meaning of the character.
IE: Right, right, right.

(Chinese original)

IR: 好, 非常好, 那如果你觉得读中文的时候, 有你不认识的字怎么办?
IE: 呃, 就是不马上查字典。
IR: 嗯。
IE: 首先猜一猜大概的意思是什么, 然后读完这段话之后, 如果猜不到, 再去查字典。
IR: 嗯嗯。
IE: 但是我一般查字典之后发现, 我猜的那个意思是对的。
IR: 哦, 那你很厉害, 那你是怎么猜的呢?
IE: 就是, 就是, 不知道怎么说, 就是按照文章的大概的意思。
IR: 哦, 对对对, 然后去猜那个字的意思。
IE: 对对对。

In Excerpt 4.17, the interviewee also tried to guess the meaning of the unknown characters. Instead of guessing the meaning from the context, this interviewee tried to analyze

the structure of the characters, the radicals the character were composed of, and the meaning of the radicals.

Excerpt 4. 17. Guessing the meaning using radicals

(English translation)

IR: Very good! Actually you have just mentioned it, what do you do when there are unknown characters while reading?
IE: I will look at what kind of character it is, look at the radicals, what they are describing.
IR: Right.
IE: Some of them are semantic-phonetic compounds, just look at the structures of the characters, like what is on the top, what is at the bottom, what is on the sides, this way I can guess. Even if it is not a correct guess, you can still make a guess, and see what the meaning is.
IR: Oh, what is your chance of correct guess, in percentage?
IE: Like 70%.
IR: That is pretty good, very high. You said you like reading in Chinese, right?
IE: Yes.

(Chinese original)

IR: 非常好, 其实你刚才已经说了, 读中文的时候有不认识的汉字, 你怎么办？
IE: 会看它是什么样的汉字, 看一下偏旁, 描述什么。
IR: 对的对的。
IE: 也有些形声字什么, 就是看汉字的结构, 就是上面是什么, 下面是什么, 旁边是什么, 这样可以猜一下, 如果不准确, 也可以猜一下, 看一下是什么意思。
IR: 啊, 你觉得大概正确率在百分之多少？
IE: 就是七十。
IR: 那不错哎, 很高哎, 那你说你很喜欢中文阅读了, 是不是？
IE: 对。

The two focus group participants in Excerpt 4.18 adopted different strategies for unknown characters. The first participant immediately looked up the unknown character. However, the second one did not. The second participant either guessed the meaning of the unknown character after reading the passage or used his/her L1 knowledge to guess. Even though the orthographies of Chinese characters and the Korean words may be different, the

pronunciations are very similar, which facilitates L2 Korean students to guess the meaning of the Chinese characters.

Excerpt 4. 18. Guessing the meaning using L1

(English translation)

IE2: I don't look up the dictionary.
IR: Oh, you don't.
IE2: Usually I finish reading, and look it up after I understand the general meaning.
IR: Oh, first you guess.
IE2: Yeah, I first guess.
IR: She looks it up first and you guess first. What do you think is the chance of correct guess, in percentage?
IE2: Based on the meaning of the passage, it is almost the same.
IR: Oh, so your guess was pretty accurate.
IE2: Also, I look at the character, when I look at the character, it is a little bit easy for me to guess its meaning.
IR: Oh, how do you guess?
IE2: Usually by looking at the Chinese character and thinking of the Korean word.
IR: Because they are the same?
IE2: Almost.
IR: Oh.
IE2: Sometimes the pronunciation is also the same, 材料 (cái liào) is jaelyo in Korean.
IR: Uh
IE2: Kind of similar, so I guess.
IR: So do you think that since your native language is Korean, it helps your Chinese learning?
IE1: It should, definitely has advantage.
IE2: Yes.

(Chinese original)

IE2: 我不查。
IR: 哦, 你不查词典。
IE2: 我一般看完, 然后大概的意思了解以后才查词典。
IR: 哦, 先猜一下。
IE2: 对, 先猜。
IR: 她先查, 你先猜, 那你觉得你猜大概百分之多少能猜对？
IE2: 大概文章的意思的话, 差不多一样的。
IR: 哦, 所以你猜的还是比较准的。
IE2: 还有看汉字嘛, 看汉字的时候, 我有点容易猜那个是什么意思。
IR: 哦, 你看汉字怎么猜 ？
IE2: 那个一般看汉字, 想起来那个韩语的字。
IR: 因为它们一样嘛 。

IE2: 差不多 。
IR: 哦 。
IE2: 有的时候发音也差不多, 那个材料我们韩语中是 jaelyo, 这样子。
IR: 嗯 。
IE2: 有点像, 所以我猜。
IR: 所以你觉得你的那个母语是韩语, 对学中文帮助大吗？
IE1: 应该是的, 一定有优势。
IE2: 对呀。

Ignoring unknown characters or words is another strategy the participants used in reading. The interviewee in Excerpt 4.19 sometimes ignored the unknown characters as long as they did not interfere with the understanding of the general idea of the passage.

Excerpt 4. 19. Ignoring unknown characters

(English translation)

IR: Oh, ok, very good. Next question, if you are reading and there are unknown characters, what do you do?
IE: I answered this question. If there are a few, I would guess their meanings. If there are a lot, I would look them up in the dictionary.
IR: For example, if there are a few and you guess their meanings, how do you guess?
IE: Actually, sometimes I don't guess their meanings, I just look at whether they would affect the meaning of the sentence.
IR: Right.
IE: If I understand the meaning of the sentence, I ignore the unknown characters.
IR: Right.
IE: But if there is a big influence, if I don't know the meanings of the characters and then I don't understand the meaning of the sentence, I would guess the meanings or look them up in the dictionary.

(Chinese original)

IR: 噢, 行, 挺好的, 下面一个问题, 如果读的时候有不认识的字, 你怎么办？
IE: 我回答了, 如果比较少, 我会猜它们的意思, 如果比较多, 我查字典。
IR: 比如说很少, 你猜它的意思, 你怎们猜呢？
IE: 其实有时候我不是猜它们的意思, 我就是看这个, 看它们会不会影响句子的意思。
IR: 对。
IE: 如果我明白它们想说什么, 我不管, 不认识的字。
IR: 对对。

IE: 但是, 如果有很大的影响, 如果我真的不认识这个字, 我完全看不懂这个句子的意思是什么, 那我应该猜意思或者查字典。

To summarize, when encountering unknown characters, the most commonly used strategy adopted by the interviewees was to guess the meaning of unknown characters from the context, using their L1 knolwedge, or using their radical knowledge. Using dictionary to look up the meaning was another commonly used strategy.

4.4.4 Approaches to improve Chinese reading. The last interview question asked the interviewees what they had done to improve their Chinese reading. Seven comments (28%) were related to reading Chinese books (Table 4.18). The books the interviewees read include their text books for reading class and for other Chinese classes, Chinese novels, books on Chinese linguistics, and so on. Their general reaction to those books was that they were difficult, so the interviewees tried to read, but they did not enjoy reading.

Six responses to this question (24%) were categorized under online reading. The interviewees read posts, articles, newspapers, and news online. Sometimes they had a purpose and sometimes they did not. They either searched for articles on a certain topic on baidu.com or other websites, or just read anything that attracted their attention online.

Other approaches that the interviewees adopted to improve their Chinese reading included reading the lyrics of the songs while listening to music or subtitles while watching movies (2, 8%), reading paper newspapers related to their major (2, 8%), and reading kids' books and graded readers (3, 12%). One response was related to reading aloud (4%) and another one to reading while listening (4%). There were also interviewees who did not take initiative to improve their Chinese reading.

Table 4. 18. Approaches to Improve Chinese Reading

	Frequency	Percentage
Read Chinese books	7	28%
Online reading (websites, newspapers, and posts)	6	24%
Read music, movie, and ads subtitles	2	8%
Newspapers	2	8%
Kids books	2	8%
Graded readers	1	4%
Recite Chinese words	1	4%
Read aloud	1	4%
Read while listening	1	4%
Nothing	2	8%

The first interviewee in Excerpt 4.20 read Chinese textbooks to improve reading.

Excerpt 4. 20. Read Chinese books

(English translation)

IR: Ok, the last question is what have you done to improve your Chinese reading?
IE2: Reading proficiency?
IR: Yes.
IE2: Just do more readings.
IE1: Usually when I read I don't read everything, I read the important part.
IR: Oh, really?
IE1: As long as I understand the main idea, that is fine.
IR: Ok, what articles do you usually read?
IE1: Oh, I don' t read recently.
IR: How about before?
IE1: Before when I first started learning Chinese, I read the textbook, that kind, I read a lot
IR: Uh, uh, uh.

(Chinese original)

IR: 好, 最后一个问题就是为了提高你们中文阅读的水平, 你们有没有做一些事情？
IE2: 阅读水平。
IR: 嗯 。
IE2: 就多看一些文章呀。
IE1: 我一般读文章的时候不是完整的读完, 那个看重要的部分。
IR: 哦, 真的吗？
IE1: 大概了解文章的意思就可以了。
IR: 就可以了, 那你一般读什么文章？
IE1: 哦, 我最近不读。

IR: 原来呢 ？
IE1: 原来我刚开始学汉语的时候, 就看那个课本呀, 那种, 就读的多 。
IR: 嗯嗯嗯。

The interviewee in Excerpt 4.21 read Chinese novels to practice reading. The books this interviewee chose was Lu Xun's works. Lu Xun was a leading figure of Chinese modern literature and used a lot of satire and irony in his writing. It is not surprising that it was difficult for the interviewee to read his works.

Excerpt 4. 21. Read Chinese books

(English translation)

IR: Uh, very very good, good, ok. In order to improve your Chinese reading, have you done any special thing to help you, to improve your Chinese reading?
IE: To improve my Chinese reading, I feel I need to read writings in Chinese, some novels.
IR: Right, right, have you read?
IE: I read some, but when I read, I feel tired.
IR: Is it because it is too difficult?
IE: Yes, sometimes it is too difficult.
IR: Uh.
IE: Too difficult.
IR: What novels have you read?
IE: I read Lu Xun's works.
IR: Uh, that is too difficult.

(Chinese original)

IR: 嗯, 特别好特别好, 好好好, 行, 那就是为了提高你的中文阅读, 你有没有特别地做一些事情来帮助你, 来提高你的中文阅读?
IE: 要提高我的中文阅读的话, 我就觉得我要读中文的写作, 一些小说。
IR: 是的是的, 你读了吗?
IE: 我读了一些, 但是读的时候感觉有点累。
IR: 是太难了吗？
IE: 对, 有的时候太难了。
IR: 嗯。
IE: 太难了。
IR: 你读了什么小说？
IE: 我读了鲁迅的那些书。
IR: 嗯, 太难了。

In Excerpt 4.22, the interviewee read anything that was interesting to him on the front page of baidu.com. The interviewee also read graded news articles on Chairman's Bao, an online Chinese news-based graded reader for L2 learners. All the news articles were written by native speakers for L2 learners in accordance with HSK word frequency list and presented in both simplified and traditional Chinese. Figure 4.4 is a screenshot of the front page of the website.

Figure 4. 5. A Screen Shot of Chairman's Bao Front Page

Excerpt 4. 22. Online reading

IE: So, I just like to read and when I could, I started reading articles online.
IR: So, articles online, what kind of articles?
IE: Honestly, I just go to Baidu and then I look for interesting things.
IR: Oh.
IE: Just on the front page of Baidu.
IR: Ok, and then you just read anything you want to read, right?
IE: Yeah, some of them are not very good, or true, but it is still fun.
IR: Uh.
IE: There is a website called Chariman's Bao, have you ever heard of it?
IR: No.
IE: They have articles written for different HSK levels, and they also have recordings, they also for each article offer a list of key words you should know first, and then they have a list of the grammar and how to use the grammar.

IR: Good.

Like the interviewees in Excerpt 4.21 and 4.22, the interviewees in Excerpt 4.23 and 4.24 also read a lot online. The two interviewees had no preference and just read anything online.

Excerpt 4. 23. Online reading

(English translation)

IR: Oh, this is very interesting. I have never thought about it, good, good, uh, ok. What special things have you done to improve your Chinese reading?
IE: (silence)
IR: You said Chinese reading is the easiest for you, how did you do it? How did you make it easy for you?
IE: Read a lot.
IR: What do you read?
IE: Read, online.
IR: Oh, online.
IE: There are different kinds of articles online, uh, about, about China, about Chinese life, Chinese culture.
IR: Uh, what websites do you always visit?
IE: What websites?
IR: Uh.
IE: Any.
IR: Any, hahaha, so you read everything.

(Chinese original)

IR: 哦, 这个很有意思, 我没有想到过, 好的好的, 嗯, 好, 那你有没有做什么特别的事情然后来提高你的中文阅读？
IE: (silence)
IR: 你说中文阅读对你是最容易的, 你是怎么做到的呢？你是怎么让它变得比较容易的?
IE: 读很多。
IR: 那你读什么?
IE: 读, 在网上。
IR: 哦，网上。
IE: 在网上, 各种各样的文章, 呃, 关于, 关于中国, 关于中国生活, 中国文化。
IR: 嗯, 那你在网上你一般是去什么网站?
IE: 什么网站?
IR: 嗯。
IE: 随便。
IR: 随便, 哈哈哈, 就你什么都看。

Excerpt 4. 24. Online reading

(English translation)

IR: Ok, ok, ok, then in order to improve your Chinese reading ability, have you done anything?
IE: Now I mainly read news online, and, uh, just read.
IR: Right, what websites do you usually visit? What news do you read?
IE: Just read everything, yeah.
IR: How long do you read per day?
IE: Around one hour.
IR: One hour per day.
IE: Read Chinese news.
IR: Can you understand most of them?
IE: Yeah, all of them.

(Chinese original)

IR: 行行行, 那那个为了提高你的中文阅读能力, 你有没有做一些什么事情？
IE: 现在我主要上网看新闻, 还有, 嗯, 就是阅读。
IR: 对对对, 那你一般上什么网站, 看什么样的新闻？
IE: 就什么都看, 对。
IR: 那你大概每天会看多久啊？
IE: 看一个小时左右吧。
IR: 每天看一个小时？
IE: 看中文的新闻。
IR: 基本上都能看懂吗？
IE: 对, 都能看懂 。

For interviewees who liked listening to Chinese songs, listening to music while reading the lyrics was another way for them to improve their Chinese reading. The interviewee in Excerpt 4.25 did not read books often, but read lyrics of the songs while listening to them.

Excerpt 4. 25. Read lyrics

(English translation)

IR: What have you done to improve your Chinese reading?
IE: Do things? What things? My, my reading is not very good.
IR: Not very good. Have your ever thought of how to make it better?
IE: I try to read everyday.
IR: What do you read everyday?
IE: It is not the books, how to say, listen to music, and then…

IR: Read the lyrics?
IE: Yeah.
IR: Then you read?
IE: Uh, right.
IR: Right, right, right.

(Chinese original)

IR: 那就是为了提高你的中文的阅读水平, 你有没有做一些什么事情?
IE: 做事情? 什么事? 我, 我的阅读, 还不太好。
IR: 不太好, 那你有没有想一下怎么让自己的阅读更好？
IE: 我试一试, 每天读。
IR: 你每天读什么。
IE: 那个, 不是这个书, 怎么说, 听音乐, 然后那个
IR: 看歌词吗？
IE: 对。
IR: 然后你会读？
IE: 嗯, 对。
IR: 对对对。

The interviewee in Excerpt 4.26 improved his Chinese reading through reading graded readers. He not only read the graded readers in his home country, but also in China during study abroad. While reading the graded readers, this interviewee also listened to the recordings of the book.

Excerpt 4. 26. Read graded readers

IR: Then, like what have you done to improve your reading in Chinese?
IE: Nothing, never anything on purpose, I just like to read.
IR: So what do you read?
IE: A couple of years ago, I bought a book published by, it is like graded Chinese readers, it is like based on HSK vocabulary list, when I was like three years ago, I bought the 1500, or 2000 words, it is based off the most common 2000 words, and I read most stories of that, I bought that, and when I was in Tsinghua (University), I bought 2500 words, and I read that.
IR: Do you read all of them? Did you enjoy reading?
IE: Yeah, cause it also has a CD, so I put the CD on my phone and I listen, I can read the book and, I just like reading in general, I just bought a book yesterday, it is like
IR: Can you show me the book? Oh, *Read Tang and Song Dynasty Poems Fluently*.
IE: This one has a CD too.
IR: Ok, where is the CD?
IE: I don't need it, I have got all of them on my phone.

IR: Ok, good.

The interviewee in Excerpt 4.27 really enjoyed his experience of reading children's books. He just searched children's books in Chinese and read them. The example provided by the interviewee was a popular children's song and he sang the song to me during the interview.

Excerpt 4. 27. Read kids books

IE: And also if you want to learn reading in Chinese, I think that, you should start from the, not from the teaching books, but from the books for kids, for Chinese kids.
IR: Why?
IE: Because there are a lot of words and characters that are really simple, very simple to understand, you can learn Chinese reading like, like Chinese people learn it.
IR: So have you ever read those books?
IE: Yeah, yeah, I have read some, some kids books.
IR: When you are in Shihezi or Lanzhou?
IE: No, when I was in Russia.
IR: You have those books?
IE: No, I read on the internet.
IR: Oh, is there a website?
IE: Not some, a lot of websites, I just search "books for kids in Chinese".
IR: So, do you like reading those books?
IE: Yeah, you know, the first thing that I learned from them is poetry for kids like, liǎng zhī lǎo hǔ, liǎng zhī lǎo hǔ, pǎo dé kuài (singing) (Two tigers, two tigers, run fast.)
IR: The song.
IE: Yeah, they are really simple and really interesting, and when you are interested in that, when it is funny, it is really simple to learn, to remember those things.

The interviewee in Excerpt 4.28 both read aloud and read while listening. He read while listening when he was by himself and read aloud in reading class. The interviewee felt that both approaches helped his Chinese reading. Listening to Chinese helps him to be familiar with the tones of characters and the pauses in sentences. Reading aloud in his reading class individually and with his teacher enabled the interviewee to read with emotion and appreciate the beauty of the written text.

Excerpt 4. 28. Read aloud and read while listening

IR: What have you done to improve your Chinese reading?

IE: What I have done to improve my Chinese reading is that most often I engage in listening.
IR: Listening, oh.
IE: So because all my textbooks, so the majority of my books have CDs
IR: Yeah, yeah, yeah
IE: So while reading, I put on the CD in my computer.
IR: Oh.
IE: So while the CD is playing, I try to read simultaneously.
IR: Oh, reading while listening.
IE: Yes.
IR: Why do you think that helps?
IE: I think that helps because I might not be able to read properly especially pertaining to the tones or the pause, certain pauses we need to observe, we have long pauses, we have short pauses, and we also have the pronunciation, because the tone is not only about the four tones, but also the tone about the intention of the author, which is also important to observe while reading, so I also pay attention to that while reading. I think it is important to listen to authentic reading by native speakers, to get into the mode of the text, to pronounce correctly, to articulate correctly, that is what I think.
IR: Uh, do you do that for every text?
IE: No, not for every text, because it is somehow very painstaking to do that.
IR: Hahaha.
IE: And we got many assignments, and we got many texts to read so I don't do that for every text, I mainly do that for reading comprehension texts.
IR: Uh.
IE: Because that is the only course where we read all the texts with the lecturer in the class. we read all the texts with him, other courses we don't necessarily read all the texts, the lecturer just explains. In the reading comprehension class, we read every passage, all the students in the class read, each person reads a paragraph.
IR: You mean read aloud?
IE: Yeah, read out aloud.
IR: Uh, do you think that helps?
IE: Yeah, I think that helps. It helps a lot because we are not Chinese language native speakers, so there are so many aspects of the language that we are not familiar with, so it is very important that the lecturer accompanies the students in reading, so we are going to get into the feeling of the text, and we are going to improve our Chinese language skills, reading skills.

To summarize, interview question # 4 asked what the interviewees have done to improve their Chinese reading. The interviewees listed nine approaches including reading Chinese books, especially textbooks, reading online, reading music, movie and ads subtitles, reading paper newspapers, reading kids books, reading graded readers, reciting and memorizing Chinese words, reading while listening. Among them, reading Chinese books and reading online were the two most frequently used approaches.

4.4.5 Other comments. At the end of each interview, I asked the interviewees what else they would like to share with me about Chinese reading. In three interviews, interviewees mentioned the relationship between characters and words, the importance of context in learning to read, and the time to offer a reading course.

In Excerpt 4.29, the two focus group participants confirmed that knowing characters did not necessarily mean knowing the meaning of the word that is composed of the same characters.

Excerpt 4. 29. The relationship between characters and words

(English Translation)

IR: Ok, ok, right, what else do you want to tell me? Oh, I have one more question. Chinese has characters and words, right? Chinese have characters, like individual characters, words are usually two-character words. Do you think that if you know the meaning of the two characters, will you know the meaning of the word or not necessarily?
IE1: Not necessarily.
IE2: Not necessarily.
IE2: Because I found, after I arrived in China, I found sometimes when I read advertisements, I can read every character, but because I don't know the words in the sentence.
IR: Right.
IE2: So I don't know what it means, for example when I took your test, there is one word, I know the two characters, but I don't know the meaning of the word, so maybe this is the characteristic of Chinese.
IR: A characteristic of Chinese, ok.
IE2: It is also what makes Chinese difficult.
IR: So when you find that you know the meanings of the two characters, but not the meaning of the word, will you guess, will you guess its meaning?
IE2: I just, like in the exam we just took, it is a little bit difficult.
IR: Right.
IE2: Because it is not in a sentence.
IR: Yes.
IE2: So I feel that if it was not in a sentence, I could not guess.
IR: Could not, actually very difficult.
IE2: Uh, yes.
IE1: If I know one character, sometimes I think because I know the meaning of this character, so this word must mean this, then I found it does not, really.
IR: Oh, so knowing characters and knowing words are two things.
IE1: No, not two things, sometimes you can guess, but sometimes you can't.

(Chinese Original)

IR: 好的好的, 行, 还有没有什么想说的, 对了我还有一个问题, 中文不是有汉字和词吗, 对不对, 中文有字, 有一个一个字, 然后词大概就是两个字的词, 你们觉得你要是知道了字的意思, 你一定能知道词的意思还是不一定？
IE1: 不一定。
IE2: 不一定。
IE2: 因为我发现, 也是到中国之后吧, 发现有时候在看广告的时候等等, 我可以读每个字, 但是因为我没有接触过句子里面的词。
IR: 对。
IE2: 所以不知道是什么意思, 比如我们在考你的考试的时候, 有一个词两个汉字都认识, 但是我不知道是什么意思, 所以是中文的特点吧。
IR: 中文的特点, 对对对。
IE2: 也是难点。
IR: 那你看到这种两个字都认识, 可是这个词的意思你不知道, 你会去猜它吗, 你会去猜它的意思吗？
IE2:我只是, 像我们刚考完的考试, 有点难。
IR: 对。
IE2: 因为不是在句子里面。
IR: 是的。
IE2:所以我觉得如果不是在句子里面, 我猜不出来。
IR:猜不出来, 就很难其实。
IE2:嗯, 是。
IE1:如果一个字认识, 有的时候我就说因为我认识这个字, 那这个词就是这个意思, 然后我发现不是这个意思, 真的。
IR: 哦, 所以知道字和知道词是两件事情。
IE1: 不是, 也不是两件事情, 有的时候你可以猜到, 但是不是一定会猜到。

The interviewees in Excerpt 4.30 talked about the importance of context in learning to read. The two participants felt that living in China increased their exposure to Chinese characters. One participant gave an example of how she practiced reading the subtitles of videos played on the subway.

Excerpt 4. 30. Language learning context

(English translation)

IR: Is there anything else you want to share with me?
IE1:To lean a language you need to go to the country where the language is spoken.

IR: Do you think that this helps your reading?
IE1: Because you always read characters, there are characters no matter where you are, so it helps.
IE2: Yes, yes.
IR: When you see characters, do you consciously think whether you know a character or not, or, just read it and don't think about it?
IE1: Sometimes I don't think about it, sometimes I do, but even if you don't think about it, you are used to reading characters, that helps your reading.
IR: Oh.
IE2: And also related to China, for example, when you take subway there are a lot of advertisements, there are also short videos, for example, I watch one short video many times, in the video one son works abroad after he grows up, but he does not call her mom often. So it is like a
IR: Public service advertisement, right?
IE2: Right, public service advertisement, but because there are always so many people in subway, so I have to read the subtitles, then I find that the first time, wow, too fast, the second time, I find I can finish reading the subtitles faster, but sometimes I still could not finish reading. I feel it is great, because you can do it. Compared to Chinese people, of course because Chinese is not my native language, every time I speak Chinese, I am still not like a Chinese
IR: Uh.
IE2: But this way I have a goal, I want to improve my reading proficiency, but I don't know what to compare to, but now I can use the advertisements in the subway as a goal, to
IR: To read and understand?
IE2: Yeah.

(Chinese original)

IR: 还有没有什么别的想对我说？
IE1:学习这个语言你应该到这个语言的环境。
IR: 那你觉得对你的阅读帮助大吗？
IE1: 因为你常常看汉字, 你在什么地方都是汉字, 所以有帮助。
IE2: 对对。
IR: 那你会不会有意识地去看看这个字认不认识还是, 看了就看了, 也不去思考。
IE1:有的时候不去思考, 有的时候可以, 但是如果不思考, 你也已经习惯看汉字, 对你的阅读也很好。
IR: 噢。
IE2: 然后就是和在中国有关, 比如说坐地铁的时候有很多广告, 除了广告还有很多小的视频, 然后就是, 比如有一个小视频, 我看过几次, 有一个儿子长大之后在国外工作, 但是他不是给他妈妈打电话等等的。所以好像是一个
IR: 公益的广告, 是吧？
IE2: 对对对, 公益广告, 但是因为, 因为地铁总是有很多人, 所以你不能听到她们在说什么, 所以必须看字幕, 然后我发现第一次看, 哇太快, 第二次的时候, 我发现可以更快的读完, 这个字幕, 但是有时候还是不太, 但是还是不完全读完等等, 我觉得非常好, 因为你可以, 相比中国人, 当然因为不是我的母语, 我们每次说中文, 还是不是像中国人一样。

IR: 嗯。
IE2: 但是这样的话我有一个目标, 我想提高我的阅读水平, 但是我不知道, 呃, 应该用什么来相比, 但是现在我可以用地铁上的广告来, 就是作为目标, 来
IR: 就是就是, 把它看懂。
IE2: 对。

The focus group participants in Excerpt 4.31 suggested to offer reading course in beginning classes.

Excerpt 4. 31. Reading course

(English translation)

IR: About Chinese reading, do you have anything else you want to share with me? Anything is fine.
(Silence 15 seconds)
IE1: I feel, reading class should be offered in Beginning I.
IR: Oh, you don't have reading class in Beginning I?
IE all: No.
IR: Oh.
IE1: We just started.
IR: But you are in intermediate class, right?
IE2: Just started Intermediate I.
IE3: I feel that in Beginning II class, they can give us simple passages to read, because we feel that the passages in Intermediate I class are so long, and a lot, we are not used to this.

(Chinese original)

IR: 那关于中文阅读, 你们还有没有什么想告诉我的, 什么都可以。
(Silence 15 seconds)
IE1: 我觉得, 在初级 1, 应该有阅读课 。
IR: 哦, 你们初级一没有阅读课吗 ？
IE all: 没有。
IR: 哦。
IE1:我们刚开始学的 。
IR: 但是你们是中级, 是吧？
IE2:中级 1 刚开始 。
IE3: 我觉得初级 2 可以给我们简单的文章, 给我们读, 因为我们觉得到中级 1, 文章突然很长, 很多, 我们有点不适应。

4.5 RQ4: *To what extent do the quantitative data and qualitative data converge or diverge with regard to the main findings of the study? How and why?*

This study examines the contribution of component skills to L2 Chinese reading comprehension. The components skills include radical knowledge, character knowledge, vocabulary knowledge, morphological knowledge, and grammar knowledge. The quantitative data collected include twelve tests to measure the five component skills and reading comprehension. The qualitative data include seventeen interviews and focus groups with twenty-five participants. The first research question asked what comtributions each component skill make to reading comprehension. The quantitative data answered this question through path analysis, that is, whether the path from a component skill to reading comprehension was significant. This question was also answered by interviewees' responses to the first interview question.

The quantitative SEM analysis shows that vocabulary knowledge had a significant direct effect on reading comprehension. Morphological knowledge had a significant indirect effect on reading comprehension through the mediation of vocabulary knowledge. The direct effects from radical knowledge to character knowledge, and from morphological knowledge to vocabulary knowledge were statistically significant. From the qualitative data, the participants listed a number of things that are important to L2 Chinese reading, including characters, understanding the meaning of the reading, words, grammar, radicals, morphological structure, tones, L1 translation, patience, and reading more.

The components that converge in both types of the data include character knowledge, vocabulary knowledge, grammar knowledge, and morphological knowledge. It seems that the linguistic components skills that I identified based on previous research and characteristics of Chinese are also important for L2 Chinese reading according to the interviewees. However, the

qualitative data revealed more component skills or factors such as tones, L1 translation, and reading experience, which were not considered in the quantitative model.

Another place where the qualitative data and the quantitative data converged was about the relationship between radical knowledge and character knowledge. From the quantitative analysis, we know that there was a significant direct effect from radical knowledge to character knowledge. The interview question #2 asked what the participants did when there were unknown characters. We can see from Table 4.17 that there were three references in the interview data where the participants mentioned that they also used radical knowledge to guess the meaning of the unknown characters.

Even though the two data sources converge on the importance of radical knowledge to character recognition, the interviewees did not solely rely on radical knowledge to guess the meaning of unknown characters. The qualitative data provided us with more and richer information about the strategies the interviewees adopted for unknown characters. It is surprising that the interviewees mentioned that they used dictionaries immediately (38%). Also, guessing from context (33%) was another commonly used strategy. Thus, even though the direct effect from radical knowledge and character knowledge was statistically significant, the interviewees in this study did not only rely on radical knowledge when they encountered unknown characters.

The qualitative data provided exemplification for the quantitative data. For example, in interview Excerpt 4.17, the interviewee gave an example of how he used radical knowledge to guess the meaning of unknown characters.

The qualitative data also expanded the quantitative results of this study. For a SEM model, the number of factors that could be examined and the kinds of questions that could be asked are limited. However, we can have a deeper understanding about L2 Chinese reading from

the qualitative interviews and focus groups. The interview questions #2 and #4 asked about students' perceptions of the difficulty of L2 Chinese reading and their attempts to improve their reading. We know from Table 4.16 that 59% of the responses to the interview question #2 reported that reading in Chinese was difficult. The interviewees also explained and elaborated on what makes reading in Chinese difficult. From the interview Excerpts 4.5 to 4.7 in Section 4.3, we can see that the participants felt that Chinese writing system, homonyms, and idioms caused reading difficulty.

The qualitative data also clarified the research findings from the quantitative data. The SEM model showed that the direct path from character knowledge to reading comprehension was not statistically significant. This was a finding that I did not expect because Chinese characters are the most basic units of Chinese script. In order to comprehend a Chinese text, the recognition of Chinese characters was expected to be a very important first step. One interviewee reflected on his learning experience and explained the relationship among Chinese characters, words and reading comprehension (Please see Excerpt 4.8 in Section 4.3). He thought that learning to read in Chinese was a multi-step process. Knowing Chinese characters did not necessarily mean that you could infer the meaning of the words that are composed of the same characters. Excerpt 4.29 further confirmed that knowing characters did not necessarily mean that learners know or could guess the meaning of the words. However, knowing the characters would make the learning of the words easier. The meaning of a character is relatively fixed when it is used as a part of a word. This explains why the direct path from character knowledge to reading comprehension was not significant while the direct path from word knowledge to reading comprehension was significant. Thus, this part of the qualitative data not only elaborates, but also clarifies the quantitative findings.

CHAPTER 5
DISCUSSION AND CONCLUSIONS

5.1 Introduction

This chapter first summarizes the key findings of this study and compares them against those of previous studies, followed by a discussion of the methodological and pedagogical implications. Finally, I suggest possible directions in which research on L2 Chinese reading might be further developed.

5.2 Summary of the Main Findings of the Study

The discussions of the key findings begin with the contribution of the component skills to reading comprehension, in particular the contribution of vocabulary knowledge to L2 Chinese reading, followed by component skills that distinguished high-skilled, middle-skilled, and low-skilled L2 Chinese readers, and ends with interviewees' perceptions of reading in Chinese.

This study adopts a component skill approach to examine the contribution of component skills to reading comprehension and the interactions among the component skills. The component skills were identified based on previous research and characteristics of the Chinese language. Altogether, semantic radical knowledge, Chinese character knowledge, vocabulary knowledge, morphological knowledge, and grammar knowledge were identified as the key component skills that contribute to L2 Chinese reading. Each component skill, including reading comprehension, was measured using two tests. A mixed-method approach was adopted and both quantitative and qualitative data were collected.

5.2.1 Vocabulary knowledge and L2 Chinese reading. This study found that among semantic radical knowledge, character knowledge, morphological knowledge, and vocabulary knowledge, only vocabulary knowledge had a direct significant effect on L2 Chinese reading

comprehension. This converges with a previous meta-analysis research finding on the relationship between vocabulary knowledge and L2 English reading comprehension (Jeon & Yamashita, 2014), where vocabulary knowledge was reported to be highly correlated with reading comprehension (r = .79). In L2 reading research, mainly in L2 English reading, the importance of vocabulary knowledge to reading comprehension have long been examined and established. In his important work *Reading Ability* (1985) and a later publication (2007), Perfetti argued for the determining effect of efficient lexical recognition and high-quality lexical representation on reading comprehension. Reading models like Verbal Efficiency Model (Perfetti, 1985), Lexical Quality Model (Perfetti, 2007), and Word Recognition Model (Adams, 1990) further established the significant role of vocabulary knowledge in reading comprehension from a theoretical perspective. As Adams (1990) noted, the ability to read words "quickly, accurately, and effortlessly" is critical to skillful reading comprehension (p. 3). This study strengthened the previous research findings on the determinant role of vocabulary knowledge to L2 reading comprehension by expanding this line of research to L2 Chinese reading.

Adopting discriminant analysis, this study also demonstrated that vocabulary knowledge could best distinguish high-skilled, middle-skilled, and low-skilled L2 Chinese readers. The dependent variable in a discriminant analysis is always a categorical variable, like high-skilled, middle-skilled, and low-skilled readers in this study. Predictor variables were eight test scores: receptive semantic radical knowledge test, semantic radical meaning matching test, lexical decision test, character knowledge test, receptive vocabulary knowledge test, vocabulary synonym test, morpheme discrimination test, and compound structure discrimination test. It was found that the receptive vocabulary knowledge test and vocabulary synonym test, two tests measuring vocabulary size and depth, were the two strongest predictors of L2 Chinese reading

ability. The two tests to measure character recognition, lexical decision test and character knowledge test, had the least predicting power. To the best of my knowledge, this is the first attempt to predict L2 Chinese reading ability using a number of linguistic skills variables. This finding further strengthened the previous finding of research question # 1 of this study on the significance of vocabulary knowledge on reading comprehension.

5.2.2 Character recognition and L2 Chinese reading. This study also for the first time revealed that character recognition had no significant direct effect on L2 Chinese reading comprehension. Vocabulary knowledge, instead, is the key to L2 Chinese reading. The research interest on Chinese characters has been on what contributes to character recognition (McBride-Chang et al., 2003; Tong, 2008; Tong, McBride-Chang, Shu, & Wong, 2009). There is also a common assumption that in order to read in Chinese, one needs to recognize Chinese characters. Even though there is no denying of the importance of Chinese characters, being able to read in Chinese requires much more than being able to recognize the characters. Even though a Chinese word can be composed of one, two or three characters, more than 74% of Chinese words are composed of two characters (Shen & Ke, 2007). Since there is no space between Chinese characters, automatic and efficient word segmentation will free limited working memory resources to higher-level sentence or passage comprehension (Grabe, 2009, p. 29). If learners are lack of word knowledge, they might spend too long combining one character with nearby ones to make sense of the meanings of possible combinations of words. This process might be time-consuming and low efficient, as a result, too much working memory resources would be devoted to the lower-level reading and little would be left for higher-level sentence or passage reading comprehension. The qualitative data further confirmed the relationship between characters and words. Even a word is composed of two characters, knowing the characters does not necessarily

mean learners can guess or infer the meaning of the words. Characters and words are related, but independent.

5.2.3 Semantic radical knowledge, character recognition, and L2 Chinese reading. This study also revealed a significant direct effect of semantic radical knowledge on character recognition. The path coefficient from semantic radical knowledge to character recognition was 0.9, which indicates that one standard deviation of increase in the knowledge of radical knowledge would result in a 0.9 standard deviation increase in the learners' character recognition. This finding is in line with research on the positive effects of semantic radical on character learning (e.g., Shen & Ke, 2007). Since 81% of Chinese characters are semantic-phonetic characters (Sun, 2006), being able to apply semantic radical knowledge in character recognition would be an important learning strategy for L2 Chinese learners.

What previous studies had not yet demonstrated is how learners dealt with unknown characters. Will they heavily rely on semantic radical knowledge to guess the meanings of unknown characters or will they use other strategies? In L2 English vocabulary and reading research, to guess the meaning of unknown words is called lexical inferencing. Lexical inferencing involves "making informed guesses as to the meaning of a word, in light of all available linguistic cues in combination with the learner's general knowledge of the world, her awareness of context and her relevant linguistic knowledge" (Haastrup 1991, p. 40). Lexical inferencing has been studied in L2s like English (Paribakht & Wesche, 2006), Russian (Comer, 2012), and Japanese (Mori, 2003). In L2 Chinese, what is of particular interest is how learners infer the meaning of unknown characters.

This study found that 52% of the responses (Table 4.17) to interview question # 3 "What do you do when there are unknown characters?" reported that the interviewees guessed the

meanings of unknown characters. Specifically, they guessed using context (33%), radicals (14%), and their L1s (5%). The most frequently used strategy was using the dictionary to look up the unknown characters (38%). Thus, using semantic radical knowledge was not the learners' first choice, not even the second one.

Thus, on one hand, research has pointed out the importance of semantic radicals on character recognition (e.g., Shen & Ke, 2007). On the other hand, learners are not taking the full advantage of semantic radicals. One possible explanation is that some learners have not realized the importance of semantic radical knowledge in character recognition. Another possible explanation is that their limited knowledge of semantic radicals might restrict them from correct guessing.

One interviewee reported that she learned the meaning of a few commonly used semantic radicals in her college in U.S.A, but the number was very limited. Another interviewee mentioned that not until he studied abroad in China did he realize that his classmates had a much richer knowledge of radicals. He then chose to self-study the radicals. Since the significant relationship has been established between radical knowledge and character recognition, learners can use their knowledge of radicals to learn characters.

5.2.4 Morphological knowledge, vocabulary knowledge, and L2 Chinese reading. As hypothesized, morphological knowledge has a significant direct effect on vocabulary knowledge. This finding is in agreement with previous research findings on the role of morphological knowledge in L1 Chinese reading (Ku & Anderson, 2003) and L2 Chinese reading (Wu, 2017). Moreover, morphological knowledge had a significant indirect effect on reading comprehension through the mediation of vocabulary knowledge. This is in agreement with Wu (2017), who found a significant indirect effect from morphological knowledge to reading comprehension

through the mediation of vocabulary knowledge as well. It needs to be noted that the two studies used different measurements for morphological knowledge. Wu (2017) used a word production test, which required students to write down two words that contained the same morpheme, but the meaning of the morpheme was different in the two words. This measured learners' knowledge of multiple meanings of one morpheme, which was similar to the morpheme discrimination test in this study. However, the morpheme discrimination test in this study tested the receptive knowledge of morphemes, not the productive knowledge. Besides morpheme discrimination test, this study also designed a morpheme structure discrimination test to measure learners' knowledge of compound structure of a word. Even though the measurements are different, two studies both revealed the significant role of morphological knowledge in L2 Chinese reading.

5.2.5 Grammar knowledge and L2 Chinese reading. Another component skill this study investigated was grammar knowledge. The significance of grammar knowledge to L2 English reading comprehension and L1 Chinese reading has been well established (Jeon & Yamashita, 2014; Chik et al., 2012; Tong et al., 2013, and Yeung et al., 2013). Grammar knowledge was even identified as the strongest correlate of L2 English comprehension (r = .85) in Jeon and Yamashita's meta-analysis study (2014). Measured by a syntactic judgment/correction test and a conjunction cloze test, grammar knowledge was found to be significantly correlated with discourse-level reading comprehension in L1 Chinese children (Tong et al., 2014). The same result was found in Yeung et al. (2013), where grammar knowledge was measured using two different tests: a word order test and a morphosyntactic knowledge test.

However, the finding on the role of grammar knowledge to L2 reading in this study contradicts previous findings. The SEM with grammar knowledge as a predictor of reading comprehension could not be identified in this study. After examing the correlation and correlation residuals of word order test, grammaticality judgment test, multiple choice test, and cloze test, those four tests were found higly correlated with each other. A further factorial analysis confirmed that the four tests were measuring one construct. Taking into account the results of statistical analysis and features of Chinese grammar, grammar knowledge in the revised model was moved to measure reading comprehension instead of predicting L2 Chinese reading comprehension. Alderson (2000) in his book *Assessing Reading* had a section on the role of grammar in reading comprehension test. He proposed that a grammar test and a reading test might measure one same construct (p. 98). Linguistically, Chinese lacks the grammatical device of inflections and function words (Li, 1996). Thus, Chinese grammar has long been viewed as simple. It seems that grammar knowledge did not make a unique contribution to L2 Chinese reading. However, since this is the first study on the role of grammar knowledge in L2 Chinese reading, more research is needed before we can draw a safe conclusion. Even though the role of grammar knowledge to reading comprehension awaits further investigation, this study starts this line of research.

5.2.6 Perceptions of L2 Chinese reading. The interview data in this study also revealed important aspects about L2 Chinese reading. First, Chinese reading was difficult for the majority of the interviewees (Table 4.16). Second, there is long way to go to improve L2 learners' Chinese reading ability and to enable them to enjoy reading.

The reasons why L2 Chinese reading was difficult vary. However, the majority of the interviewees' explanations pointed to linguistic features of Chinese. For example, a Chinese

character may represent two different pronunciations and meanings, which might be confusing to readers with limited experience, like the interviewee in Except 4.6. Another common phenomenon is that one character has two or more meanings. L2 readers need to have a sensitivity to homographs in order to read fluently (Li et al., 2002 p. 292). It requires numerous encounters of the same character in various contexts for a reader to gain a sensitivity to homographs. Furthermore, compared to English, a "complex" language, Chinese is "simplex" language according to Lian (1993, p. 64). There is a large number of idioms or four-character words in Chinese, the majority of which have historical allusions. Even though the meanings of some idioms are transparent and can be inferred from the meaning of the characters, the meaning of some idioms are very vague and requires explicit learning. Finally, Chinese script differs from that of an alphabetic language, which might cause difficulty and anxiety among L2 learners (Saito, Garza, & Horwitz, 1999; Zhou, 2017).

To conclude, this study revealed important and interesting findings on the relationship among five component skills and L2 Chinese reading. In particular, this study established the significant role of vocabulary knowledge to L2 Chinese reading.

5.3 Implications of the Study

In this section, I discuss the methodological and pedagogical implications of this study to reading research in general and L2 Chinese reading in particular.

5.3.1 Methodological implication. A mixed-method research agenda adopted in this study enabled a systematic investigation of L2 Chinese reading and its component skills. Quantitatively, the SEM model revealed both direct and indirect contributions of component skills to reading comprehension, as well as the interactions among the component skills. Compared to traditional approach like linear regression and correlation comparisons, SEM can

investigate the nonlinear and interactive relationships between latent constructs, in particular, the indirect effect of one component skill to reading comprehension through the mediation of another component skill.

Qualitatively, this study collected interview and focus group data from twenty-five participants on their perceptions of L2 Chinese reading. The interviewees' L1s and nationalities are diverse and are representative of students learning Chinese in a second language context. Rich data were collected and analyzed and interesting results were revealed.

More importantly, the quantitative and qualitative data in this study work together to create a more legitimate research. Brown (2014) discussed how quantitative data and qualitative data could enhance the consistency, fidelity, verifiability, and meaningfulness of an MMR study (p. 134). First, quantitative and qualitative data converge to provide evidence that supports similar conclusions. In this study, the component skills that contribute to reading comprehension in the SEM converge with interviewees' perception of important components. Second, the qualitative data also did not directly support the findings of the quantitative data. For example, even though the SEM model revealed the importance of semantic radical knowledge to character recognition, the interview data showed that only a small portion of the participants actually applied semantic radical knowledge to guess the meaning of unknown characters to help them with character recognition. Thirdly, the interview data provide examples for how one component skill interact with another component skill. For example, one interviewee explained how he used radical knowledge to guess the meaning of an unknown character. As discussed in Section 4.4, the qualitative data also clarified and expanded the quantitative research findings in important ways. In conclusion, by adopting an MMR research agenda, this study has shown how an MMR

study could minimize the limitations and maximize the benefits of both methods to provide a better-quality study.

5.3.2 Pedagogical implication. In addition to the methodological implications, the present study has some pedagogical implications.

Semantic radicals. First, the structure of Chinese character and the roles of semantic and phonetic radicals need to be taught at an earlier stage and requires a more comprehensive and explicit instruction. Among 7,000 commonly used Chinese characters, 80% of them are semantic-phonetic compound characters (形声字, xíngshēngzì) (Li et al., 1992). This study revealed the significant effects of semantic radical to Chinese character recognition. In spite of its importance, the qualitative interview data showed that students had limited knowledge of semantic radicals and also did not apply their knowledge in character recognition as often as we would have hoped. An introduction of all the commonly used semantic radicals, not only the most frequently used ones, would be suggested for L2 Chinese instructors. Continuous practice and specifically designed activities would also help learners familiarize with the role of semantic and phonetic radicals and apply their knowledge of radicals in the learning of Chinese characters.

Vocabulary learning. Since this study revealed the significant role of vocabulary to L2 Chinese reading, L2 Chinese reading instruction needs to pay more attention to the role of words, especially, two-character compound words. First, different aspects of vocabulary knowledge need to be taught. According to Nation (2001), there are at least ten aspects of vocabulary knowledge classified under three broad categories: form, meaning, and use. Form can mean whether learners can recognize a word and write the word. In Chinese, word parts can be unserstood as Chinese characters. It can also mean whether learners can recognize the parts that make up of a word, that is characters for the majority of Chinese words. Meaning can refer to

whether learners can recall the meaning of a word, or whether learners know different words to express the same meaning. Meaning can also refer to whether learners know the associations for a word. Use may refer to whether learners can identify the correct use of a word in a context, or whether they know the constraints on the use of a word, for example, written or spoken register, and low-frequency or high-frequency words.

The interview data from this study showed that learners did have difficulty with different aspects of vocabulary knowledge. Thus, in language teaching, L2 Chinese instructors are highly encouraged to draw learners' attention to different aspects of word knowledge. As a result, learners would need to develop what Perfetti called "high-quality lexical representations" (2007, p. 360). High-quality lexical representations would enable learners to automatically and accurately recognize words in context. Such an automatic lower-level processing would allocate more working memory resources to higher-level sentence and passage processing.

One component skill that is of particular interest in L2 Chinese vocabulary teaching and learning is morphological knowledge. Specifically, it refers to how two characters are combined to form a Chinese word and what the relationship is between the two characters. If learning Chinese characters and words is a multi-step process, then morphological knowledge is a bridge between the two. It is essential to teach students the relationship between two Chinese characters when they form a word. However, the interview data of this study failed to find evidence to show that learners in this study actively used the morphological knowledge in learning, guessing and predicting the meanings of words. This points to the importance of explicit instruction of morphological knowledge, especially how two morphemes are combined to form a word in Chinese and the five types of compound structures: juxtapositional, modificational, governmental, predicational, and governmental.

Besides explicit instruction, vocabulary can also be learned incidentally through reading (e.g. Day, Omura, & Hiramatsu, 1991; Zhou & Day, 2018). Teachers can encourage students to read a large number of Chinese books including graded readers. Extensive reading programs (Day & Bamford, 1998) can also be set up. Books on various topics and of different genres can be provided.

Reading materials. The qualitative data revealed three phenomena about L2 Chinese reading materials (Table 4.18). First, the interviewees tried to improve their L2 Chinese reading. The highest ranked approach was to read Chinese books (28%). Second, the books they read were mainly their textbooks. Third, the textbooks were too difficult so they felt tired while reading and stopped reading. The findings can be employed by reading teachers for material selection purpose. The importance of materials to L2 reading could not be overemphasized. Day and Bamford (1998) emphasized the critical role reading materials played in an extensive reading program. They pointed out that materials were *the lure and the ladder* for a reading program (p. 96). The lure is "the interesting and attractive material designed to hook the students" and the ladder refers to the wide range of material that allow students to make progress (p. 96). They also listed major categories of material that are useful for extensive reading, including learner literature or graded readers, children's books, newspapers, comics, and magazines. One interviewee in this study read graded readers and two of them read children's books. They were all positive about their reading experience. The internet also provides a large number of interesting and up-to-date reading materials such as posts, articles, and comments. In this study, some interviewees (24%) read articles on the front page of baidu.com, searched posts of their interest online, and read customer reviews from taobao.com, a shopping website. All

those materials could be incorporated into a L2 Chinese reading program. Teachers can choose reading materials that are at appropriate for students' proficiency levels.

Incorporating Extensive Reading in L2 Chinese reading. Another finding of this study was that students did not read a lot. The reasons varied. One was that the textbooks students read were too difficult. Another reason was that students felt that reading in Chinese was too difficult because there were too many unknown characters. One interviewee felt that reading in Chinese was boring and she would rather practice speaking. If students did not read a lot, it would be very hard to improve their reading.

Extensive reading (ER) as a pedagogical approach to L2 reading has been widely implemented in a variety of foreign and second language contexts. ER aims to get students read in a second language and enjoy reading by encouraging them to read a large amount of easy and interesting materials (Day & Bamford, 1998, p. 6). The positive effects of ER have been reported in research. ER can promote learners' motivation (e.g., de Burgh-Hirabe & Feryok, 2013; Judge, 2011; Komiyama, 2013; Mori, 2002; Nishino, 2007; Takase, 2007; Ro, 2013, 2016;), decrease reading anxiety (e.g., Ro, 2013; Zhou, 2017), improve reading rate (e.g., Beglar & Hunt, 2014; Beglar, Hunt, & Kite, 2012; Bell, 2001; Huffman, 2014; Matsui & Noro, 2010; Taguchi, Takayasu-Maass, & Gorsuch, 2004), improve L2 skills (e.g., Jeon & Day, 2016; Nakanishi, 2015; Sakurai, 2015; Robb & Kano, 2013; Yamashita, 2008), and create a flow experience (e.g., Kirchhoff, 2013).

In order to help ER practitioners to implement ER, Day and Bamford (2002) offered top ten principles of teaching extensive reading. Their top ten principles were:

(1) The reading material is easy.

(2) A variety of reading material on a wide range of topics must be available.

(3) Learners choose what they want to read.

(4) Learners read as much as possible.

(5) The purpose of reading is usually related to pleasure, information, and general understanding.

(6) Reading is its own reward.

(7) Reading speed is usually faster than slower.

(8) Reading is individual and silent.

(9) Teachers orient and guide their students.

(10) The teacher is a role model of a reader.

(pp. 137–141)

Furthermore, Day (2015) reexamined the nature of ER and the ten principles, and examined which ER principles were reported to be practiced in 44 ER programs. Three core ER principles were:

(1) Principle # 3 *Learners choose what they want to read* (38 programs).

(2) Principle #4 *Learners read as much as possible* (36 programs)

(3) Principle #2 *A variety of reading material on a wide range of topics is available* (35 programs)

(Day, 2015, p. 296)

If any teaching of Chinese as a foreign/second language program would implement ER, the principles listed above need to be taken into consideration. Day (2015) also pointed out a few future directions of practicing ER, including instructed ER, independent ER, blended extensive and intensive reading. Instructed ER (also called supervised ER) usually occur in a school or university. Independent ER involves individuals engaging in ER without the supervision of

language teachers. Finally, blended extensive reading and intensive reading focus on both intensive reading and extensive reading.

ER in L2 Chinese is a new field and only a few studies have reported the benefits of ER to Chinese reading. Zhou (2017) reported how one interviewee improved her L2 Chinese reading through reading graded readers. Zhou and Day (2018) suggested that reading interesting and comprehensible Chinese stories could be beneficial for the recognizing and writing of Chinese characters.

To conclude, since vocabulary knowledge is essential to L2 Chinese reading, both explicit and implicit vocabulary instruction is required. Meanwhile, considering the benefits of extensive reading, ER programs can be incorporated into the curriculum of teaching Chinese as a foreign or second language.

5.4 Limitations

One limitation of the study is that it did not examine beginning level learners' L2 Chinese reading. The participants' mean length of learning Chinese in this study was two years and eight months (32 months). Also, the HSK examination scores showed that 95.7% of them were at intermediate level or above (from level 3 to level 6). Thus, whether the same findings would be obtained for beginning level readers is not clear. It is highly possible that the beginning level readers differ from intermediate and advanced level students in significant ways. In particular, since beginning level learners are still learning basic Chinese characters, it is highly possible that Chinese characters play a significant role in their L2 Chinese reading.

Another limitation of the study was the generalizability of the study. Even though the participants in this study were born and grew up in 30 countries, over half of the participants (71, 54.9%) grew up in countries from central Asia such as Kazakhstan (37, 28.24%), Kyrgyzstan (24,

18.32%), Uzbekistan (9, 6.87%), and Tajikistan (1, 0.76%). The L1 of those participants were mainly Kazakh, Dungan, Kyrgyz, Uzbek and Russian (59%). Thus, the interpretation of the results of this study requires caution since L1 might play a role in the learners' Chinese reading. More participants with other L1s such as English, Korean, Japanese, and Spanish need to be recruited and the role of L1 background could also be included in future research design.

As for the tests to measure the component skills, this study only designed two tests to measure each component skill, which can only tap into limited aspects of learners' knowledge of the component skills. For example, the two tests to measure vocabulary knowledge are both receptive measures. Thus, the conclusion we draw on the relationship between the component skill and reading comprehension is also limited and confined to how those latent constructs are measured. Furthermore, the morpheme discrimination test and the compound structure discrimination test have cronbach's alpha values below .800. One possible explanaition is that the target words and the three options differ greatly in word frequencies, which might add error variance into the test results.

5.5 Suggestions for Future Research

While I believe the current study provides a new perspective and fills some gaps in the study of L2 Chinese reading, it is only a start. By way of conclusion, I will discuss some areas of further inquiry that this study may open up.

Inclusion of other component skills in SEM. This study hypothesized a model of L2 Chinese reading and considered the contribution of semantic radical knowledge, character knowledge, vocabulary knowledge, and morphological knowledge to reading comprehension. Another component that might be included in the model is phonological knowledge.

The reason why the future studies could include this component skill is that some interviewees highlighted the importance of pronunciation of Chinese characters, in particular, the tones, in L2 reading. The role of phonological awareness has been studied in L1 Chinese children's reading (Li et al., 2012; Wang et al., 2015). However, the effects were limited to character recognition. Thus, future research can fill this gap by investigating the role of phonological knowledge on character recognition and reading comprehension among L2 adult learners.

Comparison of L2 reading in a foreign and second language context. This study only examined L2 Chinese reading in a second language context. Differences might exist if the data were collected in a foreign language context. One interviewee reported how she watched Chinese and practiced reading while taking subways. She found her reading speed improved through reading the subtitles on the videos played in subways in China. This is only one example of how a second language context might be beneficial to L2 learners' reading development. Compared to a second language context, a foreign language context does not provide the language environment to learn a foreign language besides the classroom. How students view Chinese reading in a foreign language context might be different.

Character inferencing in L2 Chinese reading. This study revealed important findings about how language learners deal with unknown characters. Even though the study showed that 38% the interviewees inferred the meanings of unknown characters from context, little is known about whether the context is at word-level, sentence-level, or passage-level. In L2 Chinese, a few studies have been conducted on word inferencing (Wu, 2017; Fang & Jiang, 2012). However, little is known about how learners infer the meaning of an unknown character while reading. Also, the ability of lexical inferencing is related to L2 learners' language proficiency (Paribakht,

& Wesche, 2006) and their L1 background (Fang & Jiang, 2012). Thus, future research can also take learners' language proficiency and L1 background into consideration in its investigation.

Comparison of the models for intermediate and advanced learners. This study recruited participants with intermediate and above language proficiency. It would be interesting to compare the SEM models for intermediate learners and advanced learners to see whether the component skills make the same contribution or not.

Testing effect. This study designed twelve tests to measure the component skills and reading comprehension. How a component skill is measured might not only have an effect on the measurement model, but also on the structural relationship between the component skill and reading comprehension. Thus, future research might want to design different tests to tap into the five component skills and reading comprehension. For example, the two tests measuring vocabulary knowledge, receptive vocabulary knowledge test and vocabulary synonym test, both tapped into L2 Chinese learners' receptive knowledge of Chinese words. Future studies might want to design differnet tests to tap into other aspects of vocabulary knowledge, for example, the productive vocabulary knowledge, and to examine whether productive vocabulary knowledge still makes a contribution to L2 Chinese reading.

Breaking up the test battery. The tesing time of this study is around two hours. Some participants might have difficulty completing a long test, as evidenced by the missing data in the test. The future studies might want to break up the test battery into two parts. The participants can have a break during the test taking, which might improve their testing performance.

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APPENDICES

Appendix A: Background Information Survey in English, Chinese, Russian, and Arabic

Background Information Survey

1. Name: (English or Chinese) _____ Age _____
2. Gender (F/M): _____
3. Major: _____
4. What is your native language? _____
5. In which country were you born? _____
6. In which country did you grow up? _____
7. Do you have a family member with whom you have lived for a substantial period of time and who is a native speaker of mandarin or Chinese dialects? Yes/ No (circle one)
8. Do you speak mandarin or a Chinese dialect with any family members? Yes/ No (circle one)
9. How many years of Chinese have you taken? _____

	Where	To what level	Years
College			
High School			
Study Abroad			
Heritage School			
Elementary School			
Others(Churches, Tutoring, etc.)			

10. Have you lived in mainland China, Hongkong, Macau, or Taiwan? Yes/ No (circle one)
    If yes, where _____, for how long_____
11. How many **hours** per week do you read Chinese websites/newspapers/magazines/books?
    _____
12. Please *rate your ability in Chinese in the following four areas.*

    Speaking 1) Poor 2) Basic 3) Intermediate 4) advanced
    Listening 1) Poor 2) Basic 3) Intermediate 4) advanced
    Reading 1) Poor 2) Basic 3) Intermediate 4) advanced
    Writing 1) Poor 2) Basic 3) Intermediate 4) advanced
13. I am willing to be interviewed on my attitudes about reading in Chinese.
    Yes/ No (circle one)
14. Your email: _____Your cellphone_____

Thank you very much!

背景信息问卷表

12. 姓名: _____ 年龄 _____

13. 性别 : 男 _____ 女_____

14. 专业: _____

15. HSK_____ 级

16. 你的母语是什么?_____

17. 你在哪个国家出生? _____

18. 你在哪个国家长大? _____

19. 你有没有和一位说普通话或汉语方言的家庭成员生活过比较长的一段时间？

(请打勾) : 是_____不是_____

9. 你是否和任何家庭成员说普通话或汉语方言？ (请打勾) 是_____不是_____

10. 你学了多少年中文? _____ 年

	哪里	中文程度	几年
大学			
高中			
在国外			
中文学校			
小学			
其他（教堂, 家庭辅导，等）			

11. 你有没有在中国大陆，香港，澳门或台湾住过？请打勾：有_____没有_____

如果有，在哪里 _____, 多长_____ 月

12. 每星期你花多长时间阅读中文网站/报纸/杂志/书籍？ _____小时

13. 请你评估你中文听说读写的水平。

说 1) 不好 2) 一般 3) 中级 4) 高级
听 1) 不好 2) 一般 3) 中级 4) 高级
读 1) 不好 2) 一般 3) 中级 4) 高级
写 1) 不好 2) 一般 3) 中级 4) 高级

14. 您的邮件: _____您的电话号码_____

Фоновая информация

1.Ф.И.О.: _____ Возраст _____

2.Пол : м. _____ ж._____

3.Специальность: _____

4.Уровень HSK_____

5.Какой у вас родной язык?_____

6.В какой стране вы родились? _____

7.В какой стране вы выросли?_____

8.Прожили ли относительно долгое время вы с членом семьи, который говорит на литературном китайском языке или диалекте китайского языка ?**да/нет**(выберите один)

9.Общаетесь ли вы с любым членом семьи на литературном китайском языке или на диалекте китайского языка?**да/нет**(выберите один)

10.Сколько лет вы изучали китайский язык? _____

	Где?	Уровень китайского языка	Сколько лет?
в университете			
в высшей школе			
за границей			
в специальном учебном заведении китайского языка			
в начальной школе			
другим путем (церковь, репетиторство и т.д)			

11.Вы жили в материковом Китае, Гонконге или Макао?**да/нет**(выберите один)

Если да, то где_____, сколько времени_____(месяц)?

12.Сколько времени на каждой неделе вы тратите на чтение газеты, журналы, книги на китайском языке и на посещение сайтов на китайском языке? _____(час)

13. Оцените свой уровень китайского языка.

Говорить	1) плохо	2) удовлетворительно	3) хорошо	4) отлично
слушать	1) плохо	2) удовлетворительно	3) хорошо	4) отлично
читать	1) плохо	2) удовлетворительно	3) хорошо	4) отлично
писать	1) плохо	2) удовлетворительно	3) хорошо	4) отлично

14. Ваш E-mail: _____ Ваш номер телефона_____

Большое вам спасибо!

Background Information Survey المعلومات الشخصية

1. Name: (English or Chinese) _____ Age _____
   1.الاسم: (بالإنجليزية أو الصينية) _____ العمر_____
2. Gender (F/M): _____
   2.النوع (ذكر \ أنثى)_____
3. Major: _____
   3.التخصص:_____
4. What is your native language?_____
   4.ما هي لغتك الأم ؟ _____
5. In which country were you born? _____
   5.في أي بلدت وُلدت ؟ _____
6. In which country did you grow up? _____
   6.في أي بلد نشأت ؟ _____
7. Do you have a family member with whom you have lived for a substantial period of time and who is a native speaker of mandarin or Chinese dialects? Yes/ No (circle one)
   7.هل لديك أي أحد من أفراد عائلتك يتحدث اللغة الصينية كلغته الأم أو يتحدث أي لهجات محلية اخرى و قد عشت معه لفترة من الزمن ؟ (نعم \لا) (ضع دائرة)
8. Do you speak mandarin or a Chinese dialect with any family members? Yes/ No (circle one)
   8.هل تتحدث اللغة الصينية أو أي لهجات محلية أخرى مع أي فرد من أفراد عائلتك ؟ (نعم \ لا) (ضع دائرة)
9. How many years of Chinese have you taken? _____

	Where	To what level	Years
College			
High School			
Study Abroad			
Heritage School			
Elementary School			
Others(Churches, Tutoring, etc.)			

9. قمت بدراسة اللغة الصينية لمدة كم سنة ؟_____

	أين	المستوى	عدد السنوات
الكلية			
المدرسة الثانوية			
دراسة بالخارج			
مدرسة تراثية			
مدرسة ابتدائية			
أخرى (كنائس , معاهد)			

10. Have you lived in mainland China, Hong Kong, Macau, or Taiwan? Yes/ No (circle one)

If yes, where _____, for how long_____

10.هل عشت في الصين ,هونغ كونغ , ماكاو , أو تايوان ؟ نعم \ لا (ضع دائرة) . اذا كانت الاجابة نعم, أين _____ , المدة _____

11. How many **hours** per week do you read Chinese websites/newspapers/magazines/books?

_____

11.كم ساعة في الاسبوع تقرأ في المواقع الصينية \الجرائد\المجلات\الكتب؟_____

12. Please *rate your ability in Chinese in the following four areas.*

Speaking 1) Poor 2) Basic 3) Intermediate 4) advanced
Listening 1) Poor 2) Basic 3) Intermediate 4) advanced
Reading 1) Poor 2) Basic 3) Intermediate 4) advanced
Writing 1) Poor 2) Basic 3) Intermediate 4) advanced

12.قم من فضلك بتقييم مقدراتك في اللغة الصينية في كل من الاتي :

التحدث 1. غير جيد 2. مبتدئ 3. متوسط 4. عالي
الاستماع 1. غير جيد 2. مبتدئ 3. متوسط 4. عالي
القراءة 1. غير جيد 2. مبتدئ 3. متوسط 4. عالي
الكتابة 1. غير جيد 2. مبتدئ 3. متوسط 4. عالي

14. I am willing to be interviewed on my attitudes about reading in Chinese.

Yes/ No (circle one)

13.أنا اوافق على استجوابي عن موقفي تجاه دراسة اللغة الصينية. نعم\ لا (ضع دائرة)

15. Your email: _____Your cellphone_____

14. البريد الالكتروني: _____ رقم التلفون _____

Thank you very much! شكرا

Appendix B: Tests in English and Chinese, Russian, and Arabic

Test Battery

This test battery includes twelve tests that are designed to assess your Chinese radical, character, word, grammar knowledge, and reading comprehension. Please read the instructions before each section ***carefully***. Thank you very much.

这套考卷的目的是考察您的中文偏旁部首，汉字，词，语法知识，以及您的中文阅读理解能力。请仔细阅读每部分前面的指示。非常感谢！

1.Receptive Semantic Radical Knowledge Test

Instruction: Please write down the English or Chinese meaning for each of the following radicals.

请写出下面偏旁部首的英语或中文意思。

Radical	Meaning	Radical	Meaning
氵		艹	
扌		木	
亻		月	
忄		女	
阝		石	
讠		土	
疒		辶	
口		钅	
纟		虫	
饣		王	

2. Semantic Radical Meaning Matching Test

Instruction: Below you will see some unfamiliar characters. Please use your radical knowledge to figure out the character that matches the meaning given to the left and circle it.

下面您会看到一些不熟悉的汉字。请用您的偏旁部首知识，圈出和左边的意思相对应的汉字。

Meaning	Characters		
e.g to hit	技	⿰钅支	吱
1. To see	杒	⿰目刀	⿰贝刀
2. To mix	仴	抈	⿰纟月
3. Emotion	⿰日万	⿰亻万	⿰忄万
4. Mountain	⿰虫彡	⿰山彡	⿰氵彡
5. Oak	⿰亻⿱夂米	⿰木⿱夂米	⿰虫⿱夂米
6. To translate	⿰讠血	⿰山血	⿰马血
7. To bite	钫	⿰口方	⿰目方
8. Sunshine	沈	扰	⿰日尤
9. Sleeve	⿰纟羞	⿰扌羞	⿰日羞
10.To grill	㸆	⿰扌靠	⿰木靠
11. Pan	⿰女过	⿰虫过	⿰钅过
12. Grave	⿰纟吻	⿰土吻	⿰氵吻
13. To irrigate	缆	⿰氵览	⿰女览
14. To spring; to jump	⿰足约	⿰氵约	⿰礻约
15. To cry	⿰土雾	⿰钅雾	⿰口雾
16. To arrive	⿺辶花	⿰氵花	⿰虫花
17. Oyster	⿰牛都	⿰虫都	⿸广都
18. Basket	⿱⺮英	⿰讠英	⿰米英
19. To recover	⿰氵冒	⿰口冒	⿰犭冒
20. Enemy	⿵门乞	扢	仡

3. Lexical Decision Test

Instruction: please decide ***whether the following are characters or non-characters***. Please put Y after the character if it is a character and N if it is not.

请判断下面的是汉字还是非汉字。如果您觉得是汉字，请写 Y，如果不是，请写 N。

Character	Y/N	Character	Y/N	Character	Y/N
床		撤		叮	
福		犭隹		疔	
瓠		毫		至	
觉		揭		捞	
没		夸		宁	
情		悄		枢	
睡		刷		削	
玨		吸		噪	
意		饮		绰	
致		筑		萍	
歹		龄		阱	
框		婚		息	
晃		恩		甭	

4. Character Knowledge Test

Instruction: please decide ***<u>whether you know</u>*** the following characters. If you know them, please put Y after the characters. If not, please put N after the characters.

请判断您是否认识下面的这些汉字，如果认识，请写 Y， 如果不认识，请写 N。

	Y/N		Y/N		Y/N
爱		蹦		笔	
丑		王		狗	
小		孙		子	
瘟		包		钉	
菜		泪		蜂	
姑		脏		倦	
哄		大		踏	
人		伊		一	
禽		云		军	
紫		破		花	
疼		罪		舟	
水		明		倚	
爹		火		鼠	
桥		寺		虫	
钉		戴		节	

5. Receptive Vocabulary Knowledge Test

Instruction: Please choose the word on the left that matches the explanation of the word on the right.

请从左边选出和右边解释相匹配的词。

e.g. 1.老师 2.树木 3.杂志 4.花朵 5.跑步 6.垃圾	（ 1 ）工作是教学生 （ 3 ）可以阅读的 （ 5 ）一种锻炼身体的方式
1. 出院 2. 饮料 3. 房屋 4. 忽然 5. 上课 6. 财产	（ ）住的地方 （ ）病好了离开 （ ）出乎意料
1. 书本 2. 出发 3. 买菜 4. 举手 5. 名称 6.人工	（ ）王先生 （ ）不是天然的 （ ）问问题前会做这个动作
1. 吃惊 2. 特色 3. 小时候 4. 放学 5. 咱们 6. 回家	（ ）与众不同的方面 （ ）还没有长大 （ ）包括你和我
1. 做法 2. 成语 3. 做工 4. 独自 5. 说话 6. 群众	（ ）做事情的方式 （ ）一种固定的表达方式 （ ）一个人

1. 咖啡 2. 过度 3. 聚会 4. 名胜 5. 初中 6. 竞赛	（　　）风景很漂亮的地方 （　　）超出可接受的水平 （　　）可以判断谁在某一方面更强
1. 前进 2. 诋毁 3. 认同 4. 特性 5. 欣赏 6. 寿司	（　　）和其他事物不同的品质 (　　) 赞成别人的做法或价值观 (　　) 特别喜欢崇拜某一个人
1.乐曲 2.做客 3.参加 4. 出格 5. 合适 6. 比赛	（　　）弹钢琴会演奏出的东西 （　　）去别人家里 （　　）比较恰当
1. 残害 2. 起草 3. 健身 4. 口径 5. 何时 6. 粉丝	（　　）拟定初稿 （　　）处理问题的原则 （　　）一个疑问词
1. 缩水 2.地板 3. 演技 4. 演出 5. 建设 6.坐落	（　　）有的衣服洗了之后会 （　　）指演员的专业水平 （　　）指建筑物的位置
1. 焕发 2. 铸造 3. 水涨船高 4. 散户 5. 买卖 6. 作对	（　　）形容人的精神状态好 （　　）比喻一个事物随着另一事物变化而变化 （　　） 不合作

6. Vocabulary Synonym Test

Instruction: please choose the synonym for each word.

请选出每个词的同义词。

Number	Word	a	b	c	d	Answer
Example	父亲	a. 爸爸	b. 爷爷	c. 斧头	d. 交通	a
1	办法	a. 法律	b. 办公	c. 方法	d. 途径	
2	差别	a. 差生	b. 别人	c. 距离	d. 不同	
3	出境	a. 出国	b. 境况	c. 环境	d. 处理	
4	帮助	a. 帮工	b. 帮忙	c. 匪帮	d. 助理	
5	登山	a. 高山	b. 登对	c. 爬山	d. 登顶	
6	富翁	a. 丰富	b. 富人	c. 富饶	d. 致富	
7	必须	a. 胡须	b. 需要	c. 紧急	d. 必定	
8	孤独	a. 孤立	b. 独处	c. 孤单	d. 独立	
9	焦急	a. 焦虑	b. 急救	c. 焦灼	d. 着急	
10	不错	a. 挺好	b. 不对	c. 错误	d. 不行	
11	渐渐	a. 重重	b. 油油	c. 慢慢	d. 轻轻	
12	论述	a. 论文	b. 论点	c. 论证	d. 论坛	
13	大夫	a. 大人	b. 医生	c. 夫人	d. 护士	
14	联络	a. 网络	b. 联系	c. 关系	d. 联合	
15	确信	a. 坚信	b. 轻信	c. 确实	d. 确切	
16	懂得	a. 得到	b. 明白	c. 懂事	d. 相信	
17	期望	a. 失望	b. 希望	c. 期末	d. 欺负	
18	体谅	a. 体操	b. 体育	c. 原谅	d. 谅解	
19	饭店	a. 教室	b. 商店	c. 吃饭	d. 餐厅	
20	省钱	a. 花钱	b. 省心	c. 节约	d. 小气	
21	兴高采烈	a. 欢天喜地	b. 无精打采	c. 垂头丧气	d. 兴兵动众	
22	根本	a. 树根	b. 书本	c. 跟前	d. 基础	
23	特征	a. 长征	b. 征途	c. 特点	d. 特色	
24	赞许	a. 赞助	b. 允许	c. 赞扬	d. 许多	
25	觉得	a. 睡觉	b. 认为	c. 同意	d. 获得	
26	愉快	a. 开心	b. 快速	c. 偷渡	d. 放松	
27	诧异	a. 宅男	b. 差异	c. 惊讶	d. 呆萌	
28	想法	a. 想象	b. 主意	c. 理解	d. 做法	
29	壮观	a. 壮丽	b. 乐观	c. 壮大	d. 外观	
30	通宵	a. 通知	b. 宵夜	c. 整夜	d. 一年	

7. Morpheme Discrimination Test.

Instruction: The following words in each line share the same character. Please choose the word where the character has a different meaning.

下面每一行的三个词拥有同样的汉字。请选择词素含义不同的词。

	a	b	c	Answer
e.g.	a. **手**套	b. **手**续	c. **手**工	b
1	a. **信**号	b. **信**任	c. **信**息	
2	a. **小**学	b. **小**声	c. **小**姐	
3	a. **照**片	b. **照**顾	c. **照**相	
4	a. **商**量	b. **商**业	c. **商**品	
5	a. **面**粉	b. **面**前	c. **面**对	
6	a. **加**入	b. **加**油	c. **加**工	
7	a. **护**士	b. **护**照	c. **护**理	
8	a. **本**地	b. **本**科	c. **本**国	
9	a. **彩**电	b. **彩**票	c. **彩**色	
10	a. **发**票	b. **发**展	c. **发**扬	
11	a. **风**速	b. **风**向	c. **风**度	
12	a. **机**器	b. **机**遇	c. **机**械	
13	a. **基**础	b. **基**石	c. **基**督	
14	a. **精**美	b. **精**品	c. **精**力	
15	a. **亲**爱	b. **亲**密	c. **亲**眼	
16	a. **中**外	b. **中**药	c. **中**学	
17	a. **好**心	b. **好**评	c. **好**笑	
18	a. **起**源	b. **起**初	c. **起**草	
19	a. **陶**瓷	b. **陶**醉	c. **陶**器	
20	a. **通**告	b. **通**风	c. **通**过	

8. Compound Structure Discrimination Test.

Instruction: please choose the word whose characters go together in a similar way to the target word.

请选出和目标词结构相似的词。

Target word	a	b	c	Answer
e. g. 喝水	a. 出去	b. 睡觉	c. 肥胖	b
美丽	a. 艰难	b. 打死	c. 青山	
长城	a. 爱好	b. 安静	c. 春天	
出国	a. 答应	b. 发言	c. 根本	
感到	a. 公路	b. 吃完	c. 关心	
快餐	a. 留下	b. 篮球	c. 流行	
记住	a. 坚强	b. 做好	c. 家人	
破坏	a. 骑车	b. 气温	c. 剪断	
食物	a. 设计	b. 收费	c. 玩具	
头脑	a. 校长	b. 痛苦	c. 晚安	
重点	a. 英语	b. 资金	c. 转变	
走开	a. 做到	b. 座位	c. 今天	
门票	a. 领导	b. 名单	c. 离开	
交费	a. 京剧	b. 开会	c. 解开	
继续	a. 加油	b. 检查	c. 画家	
初级	a. 变成	b. 吃饭	c. 菜单	

9. The Word Order Test

Instruction: please put the following segments in order to form a sentence. You can add punctuation when it is necessary.

请把下面的部分排序，组成一个句子。您可以在需要的时候添加标点符号。

E.g. ①我 ②心情 ③好 ④非常 ⑤ 今天 。
Answer: ① ⑤ ② ④ ③
1. ①桌子 ②放着 ③书 ④上 ⑤ 一本
Answer:
2. ①地方 ②很多 ③云南 ④在 ⑤玩了 ⑥他
Answer:
3. ①对 ② 小王 ③兴趣 ④工作 ⑤ 自己的 ⑥没
Answer:
4. ①就 ②马上 ③了 ④要 ⑤超市 ⑥关门
Answer:
5. ①刚才 ②很冷 ③明天 ④说 ⑤电视里 ⑥天气
Answer:
6. ①环境 ②越来越好 ③城市的 ④变得 ⑤这个 ⑥了
Answer:
7. ①那 ②不 ③衣服 ④ 他的 ⑤是 ⑥件
Answer:
8. ①怎么变 ②其实是 ③寻找快乐的心 ④不管 ⑤大环境 ⑥一种习惯
Answer:
9. ①再检查 ②看 ③你 ④ 有没有 ⑤ 最好 ⑥还 ⑦一下 ⑧问题
Answer:
10. ①很快 ②女朋友 ③恢复了④照顾下 ⑤他 ⑥在 ⑦健康 ⑧的
Answer:
11. ①都有 ②幸福 ③的 ④理解 ⑤含义 ⑥对于 ⑦不同的 ⑧每个人
Answer:
12. ①几个朋友 ②开车 ③周末 ④都不会 ⑤我的 ⑥想去郊游 ⑦他们 ⑧但是
Answer:
13. ①在使用上 ②进餐工具 ③最主要的 ④中餐 ⑤筷子是 ⑥讲究 ⑦很多 ⑧ 也有
Answer:
14. ①都应该 ②成功 ③获得 ④失败 ⑤努力过的人 ⑥无论 ⑦还是 ⑧鲜花和掌声
Answer:
15. ①中国的 ②代替父亲 ③女英雄 ④ 而闻名天下 ⑤花木兰是 ⑥以 ⑦并打败入侵敌人 ⑧参加军队
Answer:

10. The Grammaticality Judgment Test

Instruction: There is one grammatical error in each sentence. Please underline the ungrammatical part and provide a correction. You can delete the error part, replace it with a different word/character, or move its location.
下面每个句子都有一个语法错误。请在错误的部分下面划线并改正。你可以删除错误部分，用其他词/字替换，或改变错误部分的位置。

E.g. 除了小王以外，我们班的同学还会说日语。
Correction: change 还 to 都
1.我是 2015 年去中国了。
Correction:
2. 已经 11 点了，我估计他今天一定不会来参观画展了。
Correction:
3. 难道你连这个规定还不知道吗？
Correction:
4. 你吃饭过没有？
Correction:
5. 你什么没去看电影？
Correction:
6. 这个客厅大是大，不过坐得下十个人。
Correction:
7. 我的面包把狗吃了。
Correction:
8. 我的姐姐比你的姐姐很美。
Correction:
9. 爸爸花了一个小时把早饭准备成了。
Correction:
10. 她笑了对我说,“我爱你！”
Correction:
11. 给我打电话还是发短信都可以。
Correction:
12. 昨天我见了我的女朋友，今天我再要跟她见面。
Correction:
13. 小美哭得两双眼睛都变红了。
Correction:
14. 丽丽的男朋友是很帅。
Correction:
15. 你做的很对，不要在乎别人怎么想。
Correction:
16. 学校向我家很近。
Correction:

11.Multiple Choice Test

Instruction: please read the following passages and answer the questions.
请阅读下面的文章，并回答问题。

Passage 1

我的左邻过去是一位歌星，天天躲在房子里听她自己当年演唱的唱片。右邻是一位退休的教授，天天喃喃地祈祷着什么。在我的想象中，这位教授一定很老了。

事实却不是这样的，我发现 70 岁的教授精神很好，走路时步子轻快，眼睛里闪着喜悦的光。可是那位歌星，40 多岁就已经精神很不好，腿脚也不灵便了。

原来这位歌星天天回忆过去美好的日子，对现在的生活很不满意 。而老教授虽然不再教书了，退休后却又开始学习拉丁文。他说：“每多认识一个生字，我就觉得年轻了一岁。”我听到的“祈祷”声，其实就是他的读书声。

According to the above passage, please mark the statements 1-5 with (**T**) if it is true or (**F**) if it is false.
根据上面的文章，请判断下面的句子是对(T)还是错(F).

1. 教授的年龄比歌星大。(　　)
2. 歌星的精神比教授好。 (　　)
3. 这位歌星不喜欢自己现在的生活。(　　)
4. 教授每天很忙，因为他要教学生。(　　)
5. 教授身体好是因为他每天祈祷。(　　)

Passage 2

从前，在一座很大的森林里住着很多动物。森林里有一只老虎，他是这座森林里最强壮的动物，所有的动物都害怕它，一看到老虎来了，就都跑得远远的，这只老虎非常得意，它经常在森林里走来走去，觉得自己真了不起。

有一天，老虎正在森林走着，忽然一只狐狸从树丛里跳了出来，跳到老虎面前。原来这只狐狸没有看到老虎。老虎很生气，它一把捉住这只大胆的狐狸，要把狐狸吃了。

狡猾的狐狸看到自己已经不能从老虎手里逃走了，就想出了一个办法。它对老虎说："你不能吃我！"老虎愣住了，就问："为什么？"狐狸说："玉皇大帝（Jade Emperor）派我来当这个森林的大王，谁敢吃我? 如果你不相信，我们一起在森林里走一走，看看动物们怕不怕我？"

老虎同意了。他让狐狸走到前面，自己跟在后面。 动物们看到老虎跟在狐狸的后面，都吓得赶快逃走了。这时，狐狸得意地对老虎说："看到了吗？动物们都怕我呢！"老虎也认为动物们现在怕的是狐狸，只好把狐狸放走了。

6.下面哪项是正确的 (　　)

A 老虎是最强壮的动物之一　　B 动物们都喜欢跑步

C 老虎喜欢跑来跑去　　D 动物们害怕老虎

7. 狐狸跳到老虎前面是因为：(　　)

A 它想吃老虎　　B 它想吓老虎

C 它没看见老虎　　D 它对老虎很生气

8. 第三段的"愣住"最可能的意思是：(　　)

A 笑　　B 伤心　　C 生气　　D 呆

9. 老虎放了狐狸是因为: (　　)

A 狐狸是森林的大王　　B 动物们都怕狐狸

C 老虎怕玉皇大帝　　D 老虎以为动物怕狐狸

10. 根据上文，可以知道老虎：(　　)

A 很胆小　　B 很友好　　C 很糊涂　　D 很善良

Passage 3

记得十年前一个寒冷的冬天，我住在屏东市一家满是臭虫的旅店。为了看内埔乡稻田的日出，我凌晨四点就从旅店出发，赶到内埔乡时天色还是昏暗的，我就躺在田埂边的草地上等候，没想竟昏沉沉地睡去了，醒来的时候日头已近中天。

我捶胸顿足，想到走了一个小时的夜路，难过得眼泪差一点落下来。正在这时，我看到田中的秧苗反射着阳光，田地因干旱而显出的裂纹，连绵到天边，有非常之美，是我从未见过的景象。我立即转悲为喜，感觉到如果能不执着，心境就会美好得多。

这时，一位农夫走来，好意地请我喝水，当他知道我是来看日出的美景时，抬头望着天空出神地说："如果能下雨，就比日出更美了。"我问他下雨有什么美，他说："这里闹干旱已经两个月了，没有下过一滴雨——日出有什么好呢？"我听了心里一惊，非常惭愧，以一种悔罪的心情看着天空的烈日，很能感受到农夫的忧伤。

后来，我和农夫一起向天空祈求下雨，我深切地感悟到：离开真实的生活，世间一切的美都显得虚幻不实。

11. "我"去屏东市干什么? (　　)

A 去看田中的秧苗　　B 去稻田看日出

C 去看农夫朋友　　D 去祈求天空下雨

12. "我"是什么时候醒来的？(　　)

A 凌晨四点钟　　B 快中午的时候

C 凌晨五点钟　　D 一小时以后

13. "我"为什么"捶胸顿足"？(　　)

A 走路走得太久了　　B 走夜路走得太累了

C 睡过头了　　D 太难过了

14. 下列哪项说法正确？(　　)

A 农夫不知道我来做什么　　B 我非常想喝水

C 稻田里很久没下雨了　　D 我和农夫都喜欢日出

15. 这个故事主要告诉我们什么？(　　)

A 人不能太执着　　B 下雨比日出更美

C 要多感受别人的悲伤　　D 美离不开真实的生活

Passage 4

相关研究显示，由于我国农村地区的青少年儿童食用越来越多高糖和高热量食品，肥胖比例呈快速增长。肥胖问题已非城里人和成年人的“专利”，农村青少年儿童正面临肥胖的侵袭。不同于城市，农村的儿童肥胖，有其独特的原因。

首先，随着农民收入水平提高，农村的饮食结构发生了变化。传统的清淡饮食开始向高脂肪、高热量、低纤维方向转变。“在农村，一些人觉得多吃油、多吃肉对身体好，有营养。”刘璐说，“此外，热量高的糕点和含糖饮料，也是诱发农村儿童肥胖的重要原因”。

记者调查发现，甜饮料、糕点在农村家庭很常见，成了孩子的主要零食。与此同时，在不少农村小卖部，“奥利奥”变成了“奥和奥”，“营养快线”变成了“营养干线”。一些专家表示，用料低劣、着色剂滥用、添加剂超标的假冒伪劣食品，也是造成农村儿童肥胖的重要原因。

其次，记者调查发现，农村健康营养知识匮乏。中国学生营养与健康促进会发布的《中国儿童少年营养与健康报告》显示，多数人不知道什么食物真正有营养，把鸡蛋卖了换方便面, 零食，用胡萝卜喂家禽。

“家长投其所好，孩子爱吃什么就买什么。许多家长以孩子不喜欢吃为由，放弃了培养孩子吃蔬菜、水果的饮食习惯，而选择了含糖饮料、油炸食品。”河南平舆县一名乡村教师说。

再次，受“小孩胖点好”的农村传统观念影响。“多吃一碗饭，多穿一尺布”是大部分农村老人对于肥胖的理解。加上追食、诱食、逼食等错误普遍存在的喂养方式，导致农村胖墩也越来越多。

“不少农村老人认为把孩子养得胖乎乎的是件好事，完全不知道胖是疾病的前期症状。”河南省肿瘤医院医生庄昊说，儿童肥胖如果不能及时控制和改善，严重的会得糖尿病、代谢紊乱等疾病。

16.农村人拿胡萝卜喂家禽说明了什么？(　　)

A 胡萝卜种得太多　　B 胡萝卜不好吃

C 胡萝卜没有营养　　D 农村人缺少营养知识

17. “多吃一碗饭，多穿一尺布”表明了农村老人的什么态度？(　　)

A 吃得多的话衣服也要穿大号的　　B 吃得多一点没有什么关系

C 吃得多的话孩子穿衣服不好看　　D 吃得多的话养育孩子很艰难

18.下面哪种食品最有可能存在质量问题？(　　)

A 奥利奥　　B 营养干线　　C 甜饮料　　D 糕点

19.第四段的匮乏最有可能的意思是什么? (　　)

A 丰富　　B 昂贵　　C 不足　　D 错误

20.上文主要介绍了：(　　)

A 导致肥胖的食品泛滥　　B 肥胖问题的严重后果

C 农村儿童肥胖的原因　　D 农村的不良生活习惯

12.Cloze test

Instruction: Please fill in the following blanks with ***only one Chinese character***. If you don't know how to write the character, please write pinyin with tones.

请在每个空格中***只填入一个汉字***。如果你不会写汉字，请写拼音和声调。

Passage 1

森林里，动物们决定举办一个晚会，这次演出吸引了几乎所有的动物。他们都很积极，____ 备的节目各有_____点，小鸟要给大____唱歌，老虎要跳____，小猫要画画儿，____羊要讲故事，狮____说他给大家照____，熊猫说："我不会____演，但是我可以____观众，为大家鼓____。"最后只剩下小____了，她想了好久，_____ 然得意地说："我____责为大家送免____的牛奶！"

Passage 2

一个年轻人获得一份销售工作，勤勤恳恳干了大半年，却接连失败。而他的同事，个____都干出了成绩。____实在忍受不了____种痛苦。在总经____办公室，他惭愧_____ 说，可能自己不____合这份工作。"安____工作吧，我会给____足够的时间，直____你成功为止。到____时，你再要走我____留你。"老总的宽____让年轻人很感____。他想，总该做出_____两件像样的事____后再走。 过了一_____，年轻人又走进____老总的办公室。____一次他是轻松____，他已经连续 7____月在公司销售____行榜中高居榜____。原来，这份工作____那么适合他！

1.Комплексный тест

Данный тест был создан с целью оценить ваши знания о ключевых показателях иероглифов, о грамматике иероглифов и словосочетаний, а также способность чтения текстов на китайском языке. Прочитайте, пожалуйста, внимательно инструкцию перед каждым заданием. Большое вам спасибо.

这套考卷的目的是考察您的中文偏旁部首，汉字，词，语法知识，以及您的中文阅读理解能力。请仔细阅读每部分前面的指示。非常感谢！

1.Напишите, пожалуйста, значение следующих ключей иероглифов на русском языке.

请写出下面偏旁部首的俄语意思。

Ключ	Значение	Ключ	Значение
氵		艹	
扌		木	
亻		月	
忄		女	
足		石	
讠		土	
疒		辶	
口		钅	
纟		虫	
竹		王	

2.Вы увидите незнакомые иероглифы. С помощью знаний о ключах отметьте кружком иероглиф, соотвествующий по значению левым словам.
下面您会看到一些不熟悉的汉字。请用您的偏旁部首知识，圈出和左边的意思相对应的汉字。

Значение	Иероглиф		
Например, бить	技 (circled)	⿰钅支	吱
1. смотреть	朷	⿰目刀	⿰贝刀
2. смешать	仴	抈	⿰纟月
3. чувство	⿰日万	⿰亻万	⿰忄万
4.гора	⿰虫彡	⿰山彡	⿰氵彡
5. дуб	像	橡	蟓
6. переводить	⿺辶血	⿰山血	⿰马血
7. кусать	钫	⿰口方	⿰目方
8. солнечный свет	沋	扰	⿰日尤
9. рукав	⿰纟羞	⿰扌羞	⿰日羞
10.жарить	⿰火靠	⿰扌靠	⿰木靠
11. кастрюля	⿰女过	⿰虫过	⿰钅过
12. могила	⿰纟勿	圽	沕
13. орошать	缆	⿰氵览	⿰女览
14. прыгать	⿰足约	⿰氵约	⿰衤约
15. плакать	⿰土雾	⿰钅雾	⿰口雾
16. прибыть	⿺辶花	⿰氵花	⿰虫花
17. устрица	⿰牛都	⿰虫都	⿸广都
18. корзина	⿱⺮英	⿰讠英	⿰米英
19. возвращать	湄	⿰口眉	猸
20. враг	⿵门乞	扢	仡

3.Определите, пожалуйста, это иероглиф или не иероглиф. Если да, напишитеY, если нет напишитеN.
请判断下面的是汉字还是非汉字。如果您觉得是汉字，请写 Y，如果不是，请写 N。

Иероглиф	Yes/No	Иероглиф	Yes/No	Иероглиф	Yes/No
床		撤		叮	
福		雉		疔	
瓠		毫		至	
觉		揭		捞	
没		亏		宁	
情		悄		枢	
睡		刷		削	
玭		吸		噪	
意		饮		绰	
致		筑		萍	
歹		龄		阱	
框		婚		息	
晃		恩		甭	

4.Знаете ли вы следующие иероглифы. Если знаете, напишитеY. Если не знаете, напишите N.

请判断您是否认识下面的这些汉字，如果认识，请写 Y， 如果不认识，请写 N。

	Y/N		Y/N		Y/N
爱		蹦		笔	
丑		王		狗	
小		孙		子	
瘟		包		钉	
菜		泪		蜂	
姑		脏		倦	
哄		大		踏	
人		伊		一	
禽		云		军	
紫		破		花	
疼		罪		舟	
水		明		倚	
爹		火		鼠	
桥		寺		虫	
钉		戴		节	

5.Выберите слова слева, соответствующие комментариям справа.

请从左边选出和右边解释相匹配的词。

Например: **1.老师** 2.树木 **3.杂志** 4.花朵 **5.跑步** 6.垃圾	（ 1 ）工作是教学生 （ 3 ）可以阅读的 （ 5 ）一种锻炼身体的方式
1. 出院 2. 饮料 3. 房屋 4. 忽然 5. 上课 6. 财产	（ ）住的地方 （ ）病好了离开 （ ）出乎意料
1. 书本 2. 出发 3. 买菜 4. 举手 5. 名称 6.人工	（ ）王先生 （ ）不是天然的 （ ）问问题前会做这个动作
1. 吃惊 2. 特色 3. 小时候 4. 放学 5. 咱们 6. 回家	（ ）与众不同的方面 （ ）还没有长大 （ ）包括你和我
1. 做法 2. 成语 3. 做工 4. 独自 5. 说话 6. 群众	（ ）做事情的方式 （ ）一种固定的表达方式 （ ）一个人
1. 咖啡 2. 过度 3. 聚会	（ ）风景很漂亮的地方 （ ）超出可接受的水平

4. 名胜 5. 初中 6. 竞赛	（　　）可以判断谁在某一方面更强
1. 前进 2. 诋毁 3. 认同 4. 特性 5. 欣赏 6. 寿司	（　　）和其他事物不同的品质 (　　) 赞成别人的做法或价值观 (　　) 特别喜欢崇拜某一个人
1.乐曲 2.做客 3.参加 4. 出格 5. 合适 6. 比赛	（　　）弹钢琴会演奏出的东西 （　　）去别人家里 （　　）比较恰当
1. 残害 2. 起草 3. 健身 4. 口径 5. 何时 6. 粉丝	（　　）拟定初稿 （　　）处理问题的原则 （　　）一个疑问词
1. 缩水 2.地板 3. 演技 4. 演出 5. 建设 6.坐落	（　　）有的衣服洗了之后会 （　　）指演员的专业水平 （　　）指建筑物的位置
1. 焕发 2. 铸造 3. 水涨船高 4. 散户 5. 买卖 6. 作对	（　　）形容人的精神状态好 （　　）比喻一个事物随着另一事物变化而变化 （　　） 不合作

6.Выберите синоним к каждому слову.请选出每个词的同义词。

Номер	слово	a	b	c	d	Ответ
Например:	父亲	a.爸爸	b.爷爷	c. 斧头	d. 交通	a
1	办法	a. 法律	b. 办公	c. 方法	d. 途径	
2	差别	a. 差生	b. 别人	c. 距离	d. 不同	
3	出境	a. 出国	b. 境况	c. 环境	d. 处理	
4	帮助	a. 帮工	b. 帮忙	c. 匪帮	d. 助理	
5	登山	a. 高山	b. 登对	c. 爬山	d. 登顶	
6	富翁	a. 丰富	b. 富人	c. 富饶	d. 致富	
7	必须	a. 胡须	b. 需要	c. 紧急	d. 必定	
8	孤独	a. 孤立	b. 独处	c. 孤单	d. 独立	
9	焦急	a. 焦虑	b. 急救	c. 焦灼	d.着急	
10	不错	a. 挺好	b. 不对	c. 错误	d. 不行	
11	渐渐	a. 重重	b. 油油	c. 慢慢	d. 轻轻	
12	论述	a. 论文	b. 论点	c.论证	d. 论坛	
13	大夫	a. 大人	b. 医生	c. 夫人	d. 护士	
14	联络	a. 网络	b. 联系	c. 关系	d. 联合	
15	确信	a. 坚信	b. 轻信	c. 确实	d. 确切	
16	懂得	a. 得到	b. 明白	c. 懂事	d. 相信	
17	期望	a. 失望	b. 希望	c. 期末	d. 欺负	
18	体谅	a. 体操	b. 体育	c. 原谅	d. 谅解	
19	饭店	a. 教室	b. 商店	c. 吃饭	d. 餐厅	
20	省钱	a. 花钱	b. 省心	c. 节约	d. 小气	
21	兴高采烈	a. 欢天喜地	b. 无精打采	c. 垂头丧气	d. 兴兵动众	
22	根本	a. 树根	b. 书本	c. 跟前	d. 基础	
23	特征	a. 长征	b. 征途	c. 特点	d. 特色	
24	赞许	a. 赞助	b. 允许	c. 赞扬	d. 许多	
25	觉得	a. 睡觉	b. 认为	c. 同意	d. 获得	
26	愉快	a. 开心	b. 快速	c. 偷渡	d. 放松	
27	诧异	a. 宅男	b. 差异	c. 惊讶	d. 呆萌	
28	想法	a. 想象	b. 主意	c. 理解	d. 做法	
29	壮观	a. 壮丽	b. 乐观	c. 壮大	d. 外观	
30	通宵	a. 通知	b. 宵夜	c. 整夜	d. 一年	

7. В трех словах каждой строки имеется одинаковый иероглиф. Выберите, пожалуйста, иероглиф, отличающийся значением.

下面每一行的三个词拥有同样的汉字。请选择词素含义不同的词。

	a	b	c	Ответ
Например:	a.手套	b.手续	c.手工	b
1	a.信号	b.信任	c.信息	
2	a.小学	b.小声	c.小姐	
3	a.照片	b.照顾	c.照相	
4	a.商量	b.商业	c.商品	
5	a.面粉	b.面前	c.面对	
6	a.加入	b.加油	c.加工	
7	a.护士	b.护照	c.护理	
8	a.本地	b.本科	c.本国	
9	a.彩电	b.彩票	c.彩色	
10	a.发票	b.发展	c.发扬	
11	a.风速	b.风向	c.风度	
12	a.机器	b.机遇	c.机械	
13	a.基础	b.基石	c.基督	
14	a.精美	b.精品	c.精力	
15	a.亲爱	b.亲密	c.亲眼	
16	a.中外	b.中药	c.中学	
17	a.好心	b.好评	c.好笑	
18	a.起源	b.起初	c.起草	
19	a.陶瓷	b.陶醉	c.陶器	
20	a.通告	b.通风	c.通过	

8. Выберите слово, которое похоже на заданное слово по составу.

请选出和目标词结构相似的词。

Заданное слово	a	b	c	Ответ
Например: 喝水	a.出去	b.睡觉	c.肥胖	b
美丽	a.艰难	b.打死	c.青山	
长城	a.爱好	b.安静	c.春天	
出国	a.答应	b.发言	c.根本	
感到	a.公路	b.吃完	c.关心	
快餐	a.留下	b.篮球	c.流行	
记住	a.坚强	b.做好	c.家人	
破坏	a.骑车	b.气温	c.剪断	
食物	a.设计	b.收费	c.玩具	
头脑	a.校长	b.痛苦	c.晚安	
重点	a.英语	b.资金	c.转变	
走开	a.做到	b.座位	c.今天	
门票	a.领导	b.名单	c.离开	
交费	a.京剧	b.开会	c.解开	
继续	a.加油	b.检查	c.画家	
初级	a.变成	b.吃饭	c.菜单	

9. Расположите следующие номера в последовательном порядке, чтобы составилось предложения. Поставьте знак препинания, где нужно.

请把下面的部分排序，组成一个句子。您可以在需要的时候添加标点符号。

Например: ①我 ②心情 ③好 ④非常 ⑤ 今天 。
ответ: ① ⑤ ② ④ ③
1. ①桌子 ②放着 ③书 ④上 ⑤ 一本
ответ:
2. ①地方 ②很多 ③云南 ④在 ⑤玩了 ⑥他
ответ:
3. ①对 ② 小王 ③兴趣 ④工作 ⑤ 自己的 ⑥没
ответ:
4. ①就 ②马上 ③了 ④要 ⑤超市 ⑥关门
ответ:
5. ①刚才 ②很冷 ③明天 ④说 ⑤电视里 ⑥天气
ответ:
6. ①环境 ②越来越好 ③城市的 ④变得 ⑤这个 ⑥了
ответ:
7. ①那 ②不 ③衣服 ④ 他的 ⑤是 ⑥件
ответ:
8. ①怎么变 ②其实是 ③寻找快乐的心 ④不管 ⑤大环境 ⑥一种习惯
ответ:
9. ①再检查 ②看 ③你 ④ 有没有 ⑤ 最好 ⑥还 ⑦一下 ⑧问题
ответ:
10. ①很快 ②女朋友 ③恢复了 ④照顾下 ⑤他 ⑥在 ⑦健康 ⑧的
ответ:
11. ①都有 ②幸福 ③的 ④理解 ⑤含义 ⑥对于 ⑦不同的 ⑧每个人
ответ:
12. ①几个朋友 ②开车 ③周末 ④都不会 ⑤我的 ⑥想去郊游 ⑦他们 ⑧但是
ответ:
13. ①在使用上 ②进餐工具 ③最主要的 ④中餐 ⑤筷子是 ⑥讲究 ⑦很多 ⑧也有
ответ:
14. ①都应该 ②成功 ③获得 ④失败 ⑤努力过的人 ⑥无论 ⑦还是 ⑧鲜花和掌声
ответ:
15. ①中国的 ②代替父亲 ③女英雄 ④ 而闻名天下⑤花木兰是 ⑥以 ⑦并打败入侵敌人 ⑧参加军队
ответ:

10. В каждом предложении есть одна грамматическая ошибка. Подчеркните, пожалуйста, не правильную часть и исправьте ошибку. Вы можете удалить эту часть, заменить её другими словами или конструкциями, а так же менять место неправильной части.
下面每个句子都有一个语法错误。请在错误的部分下面划线并改正。你可以删除错误部分，用其他词/字替换，或改变错误部分的位置。

Например: 除了小王以外，我们班的同学还会说日语。
Исправление ошибки: изменить 还 на都
1.我是 2015 年去中国了。
Исправление ошибки:
2. 已经 11 点了，我估计他今天一定不会来参观画展了。
Исправление ошибки:
3. 难道你连这个规定还不知道吗？
Исправление ошибки:
4. 你吃饭过没有？
Исправление ошибки:
5. 你什么没去看电影？
Исправление ошибки:
6. 这个客厅大是大，不过坐得下十个人。
Исправление ошибки:
7. 我的面包把狗吃了。
Исправление ошибки:
8. 我的姐姐比你的姐姐很美。
Исправление ошибки:
9. 爸爸花了一个小时把早饭准备成了。
Исправление ошибки:
10. 她笑了对我说，“我爱你！”
Исправление ошибки:
11. 给我打电话还是发短信都可以。
Исправление ошибки:
12. 昨天我见了我的女朋友，今天我再要跟她见面。
Исправление ошибки:
13. 小美哭得两双眼睛都变红了。
Исправление ошибки:
14. 丽丽的男朋友是很帅。
Исправление ошибки:
15. 你做的很对，不要在乎别人怎么想。
Исправление ошибки:
16. 学校向我家很近。
Исправление ошибки:

11.Чтение

Прочитайте следующие тексты, ответьте на вопросы.

Текст 1

我的左邻过去是一位歌星，天天躲在房子里听她自己当年演唱的唱片。右邻是一位退休的教授，天天喃喃地祈祷着什么。在我的想象中，这位教授一定很老了。

事实却不是这样的，我发现 70 岁的教授精神很好，走路时步子轻快，眼睛里闪着喜悦的光。可是那位歌星，40 多岁就已经精神很不好，腿脚也不灵便了。

原来这位歌星天天回忆过去美好的日子，对现在的生活很不满意 。而老教授虽然不再教书了，退休后却又开始学习拉丁文。他说：“每多认识一个生字，我就觉得年轻了一岁。”我听到的“祈祷”声，其实就是他的读书声。

Прочитайте тест. Выразите своё согласие или не согласие с тем, о чём в тексте говорится. Если да, отметьте (T), если нет, отметьте(F).

1. 教授的年龄比歌星大。(　　)
2. 歌星的精神比教授好。 (　　)
3. 这位歌星不喜欢自己现在的生活。(　　)
4. 教授每天很忙，因为他要教学生。(　　)
5. 教授身体好是因为他每天祈祷。(　　)

Текст 2

从前，在一座很大的森林里住着很多动物。森林里有一只老虎，他是这座森林里最强壮的动物，所有的动物都害怕它，一看到老虎来了，就都跑得远远的，这只老虎非常得意，它经常在森林里走来走去，觉得自己真了不起。

有一天，老虎正在森林走着，忽然一只狐狸从树丛里跳了出来，跳到老虎面前。原来这只狐狸没有看到老虎。老虎很生气，它一把捉住这只大胆的狐狸，要把狐狸吃了。

狡猾的狐狸看到自己已经不能从老虎手里逃走了，就想出了一个办法。它对老虎说："你不能吃我！"老虎愣住了，就问："为什么？"狐狸说："玉皇大帝（Jade Emperor）派我来当这个森林的大王，谁敢吃我? 如果你不相信，我们一起在森林里走一走，看看动物们怕不怕我？"

老虎同意了。他让狐狸走到前面，自己跟在后面。 动物们看到老虎跟在狐狸的后面，都吓得赶快逃走了。这时，狐狸得意地对老虎说："看到了吗？动物们都怕我呢！"老虎也认为动物们现在怕的是狐狸，只好把狐狸放走了。

6.下面哪项是正确的 (　　)

A 老虎是最强壮的动物之一　　B 动物们都喜欢跑步

C 老虎喜欢跑来跑去　　D 动物们害怕老虎

7. 狐狸跳到老虎前面是因为：(　　)

A 它想吃老虎　　B 它想吓老虎

C 它没看见老虎　　D 它对老虎很生气

8. 第三段的"愣住"最可能的意思是：(　　)

A 笑　　B 伤心　　C 生气　　D 呆

9. 老虎放了狐狸是因为: (　　)

A 狐狸是森林的大王　　B 动物们都怕狐狸

C 老虎怕玉皇大帝　　D 老虎以为动物怕狐狸

10. 根据上文，可以知道老虎：(　　)

A 很胆小　　B 很友好　　C 很糊涂　　D 很善良

Текст 3

记得十年前一个寒冷的冬天，我住在屏东市一家满是臭虫的旅店。为了看内埔乡稻田的日出，我凌晨四点就从旅店出发，赶到内埔乡时天色还是昏暗的，我就躺在田埂边的草地上等候，没想竟昏沉沉地睡去了，醒来的时候日头已近中天。

我捶胸顿足，想到走了一个小时的夜路，难过得眼泪差一点落下来。正在这时，我看到田中的秧苗反射着阳光，田地因干旱而显出的裂纹，连绵到天边，有非常之美，是我从未见过的景象。我立即转悲为喜，感觉到如果能不执着，心境就会美好得多。

这时，一位农夫走来，好意地请我喝水，当他知道我是来看日出的美景时，抬头望着天空出神地说："如果能下雨，就比日出更美了。"我问他下雨有什么美，他说："这里闹干旱已经两个月了，没有下过一滴雨——日出有什么好呢？"我听了心里一惊，非常惭愧，以一种悔罪的心情看着天空的烈日，很能感受到农夫的忧伤。

后来，我和农夫一起向天空祈求下雨，我深切地感悟到：离开真实的生活，世间一切的美都显得虚幻不实。

11. "我"去屏东市干什么? (　　)

A 去看田中的秧苗　　B 去稻田看日出

C 去看农夫朋友　　D 去祈求天空下雨

12. "我"是什么时候醒来的？(　　)

A 凌晨四点钟　　B 快中午的时候

C 凌晨五点钟　　D 一小时以后

13. "我"为什么"捶胸顿足"？(　　)

A 走路走得太久了　　B 走夜路走得太累了

C 睡过头了　　D 太难过了

14. 下列哪项说法正确？(　　)

A 农夫不知道我来做什么　　B 我非常想喝水

C 稻田里很久没下雨了　　D 我和农夫都喜欢日出

15. 这个故事主要告诉我们什么？(　　)

A 人不能太执着　　B 下雨比日出更美

C 要多感受别人的悲伤　　D 美离不开真实的生活

Текст 4

相关研究显示，由于我国农村地区的青少年儿童食用越来越多高糖和高热量食品，肥胖比例呈快速增长。肥胖问题已非城里人和成年人的“专利”，农村青少年儿童正面临肥胖的侵袭。不同于城市，农村的儿童肥胖，有其独特的原因。

首先，随着农民收入水平提高，农村的饮食结构发生了变化。传统的清淡饮食开始向高脂肪、高热量、低纤维方向转变。“在农村，一些人觉得多吃油、多吃肉对身体好，有营养。”刘璐说，“此外，热量高的糕点和含糖饮料，也是诱发农村儿童肥胖的重要原因。”

记者调查发现，甜饮料、糕点在农村家庭很常见，成了孩子的主要零食。与此同时，在不少农村小卖部，“奥利奥”变成了“奥和奥”，“营养快线”变成了“营养干线”。一些专家表示，用料低劣、着色剂滥用、添加剂超标的假冒伪劣食品，也是造成农村儿童肥胖的重要原因。

其次，记者调查发现，农村健康营养知识匮乏。中国学生营养与健康促进会发布的《中国儿童少年营养与健康报告》显示，多数人不知道什么食物真正有营养，把鸡蛋卖了换方便面, 零食，用胡萝卜喂家禽。

“家长投其所好，孩子爱吃什么就买什么。许多家长以孩子不喜欢吃为由，放弃了培养孩子吃蔬菜、水果的饮食习惯，而选择了含糖饮料、油炸食品。”河南平舆县一名乡村教师说。

再次，受“小孩胖点好”的农村传统观念影响。“多吃一碗饭，多穿一尺布”是大部分农村老人对于肥胖的理解。加上追食、诱食、逼食等错误普遍存在的喂养方式，导致农村胖墩也越来越多。

“不少农村老人认为把孩子养得胖乎乎的是件好事，完全不知道胖是疾病的前期症状。”河南省肿瘤医院医生庄昊说，儿童肥胖如果不能及时控制和改善，严重的会得糖尿病、代谢紊乱等疾病。

16.农村人拿胡萝卜喂家禽说明了什么？(　　)

A 胡萝卜种得太多　　B 胡萝卜不好吃

C 胡萝卜没有营养　　D 农村人缺少营养知识

17.“多吃一碗饭，多穿一尺布”表明了农村老人的什么态度？(　　)

A 吃得多的话衣服也要穿大号的　　B 吃得多一点没有什么关系

C 吃得多的话孩子穿衣服不好看　　D 吃得多的话养育孩子很艰难

18.下面哪种食品最有可能存在质量问题？(　　)

A 奥利奥　　B 营养干线　　C 甜饮料　　D 糕点

19.第四段的匮乏最有可能的意思是什么? (　　)

A 丰富　　B 昂贵　　C 不足　　D 错误

20.上文主要介绍了：(　　)

A 导致肥胖的食品泛滥　　B 肥胖问题的严重后果

C 农村儿童肥胖的原因　　D 农村的不良生活习惯

12.Заполните пропуски одним подходящим иероглифом. Если вы не знаете, как пишется этот иероглиф, напишите соответствующую ему фонетическую транскрипцию китайского языка (pinyin) с тоном.

Текст 1

森林里，动物们决定举办一个晚会，这次演出吸引了几乎所有的动物。他们都很积极，____ 备的节目各有____点，小鸟要给大_____唱歌，老虎要跳_____，小猫要画画儿，_____羊要讲故事，狮____说他给大家照_____，熊猫说：“我不会____演，但是我可以_____观众，为大家鼓____。”最后只剩下小___了，她想了好久，____ 然得意地说：“我_____责为大家送免_____的牛奶！”

Текст 2

一个年轻人获得一份销售工作，勤勤恳恳干了大半年，却接连失败。而他的同事，个_____都干出了成绩。_____实在忍受不了_____种痛苦。在总经_____办公室，他惭愧_____ 说，可能自己不_____合这份工作。“安_____工作吧，我会给_____足够的时间，直_____你成功为止。到_____时，你再要走我_____留你。”老总的宽_____让年轻人很感_____。他想，总该做出_____两件像样的事_____后再走。 过了一_____，年轻人又走进_____老总的办公室。_____一次他是轻松_____，他已经连续 7_____月在公司销售_____行榜中高居榜_____。原来，这份工作_____那么适合他！

Test Battery

This test battery includes twelve tests that are designed to assess your Chinese radical, character, word, grammar knowledge, and reading comprehension. Please read the instructions before each section ***carefully***. Thank you very much.

هذا الاختبار يتضمن اثني عشر سؤالا وضع لقياس قدرتك في جذور الرموز الصينية و الرموز و الكلمات و معرفتك بقواعد النحو و القراءة و الفهم . لذا قم من فضلك بقراءة الارشادات أدناه امام كل قسم بحذر. شكراً.

这套考卷的目的是考察您的中文偏旁部首，汉字，词，语法知识，以及您的中文阅读理解能力。请仔细阅读每部分前面的指示。非常感谢！

1. Receptive Semantic Radical Knowledge test

Instruction: Please write down the English meaning for each of the following radicals.

قم من فضلك بكتابة معاني هذه الجذور باللغة الانجليزية.

请写出下面偏旁部首的英语意思。

Radical الجذر	Meaning المعنى	Radical الجذر	Meaning المعنى
氵		艹	
扌		木	
亻		月	
忄		女	
阝		石	
讠		土	
疒		辶	
口		钅	
纟		虫	
饣		王	

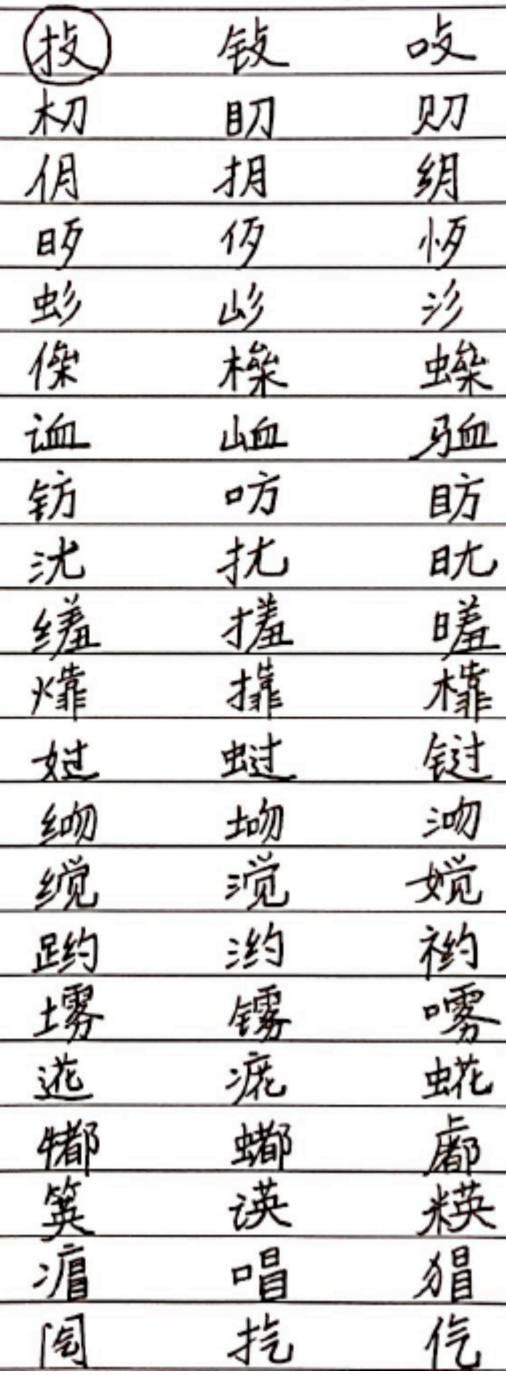
2. Semantic Radical Meaning Matching Test

Instruction: Below you will see some unfamiliar characters. Please use your radical knowledge to figure out the character that matches the meaning given to the left and circle it.

أدناه سترى رموز لا تعرفها , قم من فضلك باستخدام مدى معرفتك بالجذور لاستنتاج المعنى لكل رمز من القائمة باليسار ثم قم بوضع دائرة عليه.

下面您会看到一些不熟悉的汉字。请用您的偏旁部首知识，圈出和左边的意思相对应的汉字。

Meaning المعنى	Characters الرموز
e.g to hit مثال : يضرب	
1.To see يرى	
2.To mix يمزج	
3.Emotion إحساس	
4.Mountain جبل	
5.Oak بلوط \ سنديان	
6.To translate يترجم	
7.To bite يعض	
8.Sunshine ضوء الشمس	
9.Sleeve كُم	
10.To grill يشوي	
11.Pan مقلاة	
12.Grave قبر	
13.To irrigate يسقي	
14.To spring; to jump يقفز	
15.To cry يبكي	
16.To arrive يصل	
17.Oyster محار	
18.Basket سلة	
19.To recover يستعيد	
20.Enemy عدو	



3. Lexical Decision Test

Instruction: please decide ***whether the following are characters or non-characters***. Please put Y after the character if it is a character and N if it is not.

قم من فضلك بتحديد اذا كان أدناه هي رموز صحيحة ام غير صحيحة . إذا كانت صحيحة ضح الحرف() و اذا كانت غير صحيحة ضع الحرف() .

请判断下面的是汉字还是非汉字。如果您觉得是汉字，请写 Y，如果不是，请写 N。

Character الرمز	Yes/No لا\نعم	Character الرمز	Yes/No لا\نعم	Character الرمز	Yes/No لا\نعم
床		撤		叮	
福		犭隹		疔	
瓠		毫		至	
觉		揭		捞	
没		弓		宁	
情		悄		枢	
睡		刷		削	
玭		吸		噪	
意		饮		绰	
致		筑		萍	
歹		龄		阱	
框		婚		息	
晃		恩		甭	

4. Character Knowledge Test

Instruction: please decide ***<u>whether you know</u>*** the following characters. If you know them, please put Y after the characters. If not, please put N after the characters.

إرشاد: من فضلك قم بتحديد اذا كنت تعرف هذه الرموز أم لا . إذا كنت تعرف الرمز فضع حرف () و إذا لم تكن تعرف ضع حرف ().

请判断您是否认识下面的这些汉字，如果认识，请写 Y， 如果不认识，请写 N。

	Y/N		Y/N		Y/N
爱		蹦		笔	
丑		王		狗	
小		孙		子	
癌		包		钉	
菜		泪		蜂	
姑		脏		倦	
毋		大		踏	
人		伊		一	
禽		云		军	
紫		破		花	
疼		罪		舟	
水		明		倚	
爹		火		鼠	
桥		寺		虫	
钉		戴		节	

5. Receptive Vocabulary Knowledge Test

Instruction: Please choose the word on the left that matches the explanation of the word on the right.

قم من فضلك باختيار من اليسار الكلمة التي توافق شرحها من اليمين.

请从左边选出和右边解释相匹配的词。

e.g. مثال **1.老师** 2.树木 **3.杂志** 4.花朵 **5.跑步** 6.垃圾	（ 1 ）工作是教学生 （ 3 ）可以阅读的 （ 5 ）一种锻炼身体的方式
1. 出院 2. 饮料 3. 房屋 4. 忽然 5. 上课 6. 财产	（ ）住的地方 （ ）病好了离开 （ ）出乎意料
1. 书本 2. 出发 3. 买菜 4. 举手 5. 名称 6.人工	（ ）王先生 （ ）不是天然的 （ ）问问题前会做这个动作
1. 吃惊 2. 特色 3. 小时候 4. 放学 5. 咱们 6. 回家	（ ）与众不同的方面 （ ）还没有长大 （ ）包括你和我
1. 做法 2. 成语 3. 做工 4. 独自	（ ）做事情的方式 （ ）一种固定的表达方式 （ ）一个人

5. 说话 6. 群众	
1. 咖啡 2. 过度 3. 聚会 4. 名胜 5. 初中 6. 竞赛	（　　）风景很漂亮的地方 （　　）超出可接受的水平 （　　）可以判断谁在某一方面更强
1. 前进 2. 诋毁 3. 认同 4. 特性 5. 欣赏 6. 寿司	（　　）和其他事物不同的品质 (　　) 赞成别人的做法或价值观 (　　) 特别喜欢崇拜某一个人
1.乐曲 2.做客 3.参加 4. 出格 5. 合适 6. 比赛	（　　）弹钢琴会演奏出的东西 （　　）去别人家里 （　　）比较恰当
1. 残害 2. 起草 3. 健身 4. 口径 5. 何时 6. 粉丝	（　　）拟定初稿 （　　）处理问题的原则 （　）一个疑问词
1. 缩水 2.地板 3. 演技 4. 演出 5. 建设 6.坐落	（　　）有的衣服洗了之后会 （　　）指演员的专业水平 （　　）指建筑物的位置
1. 焕发 2. 铸造 3. 水涨船高 4. 散户 5. 买卖 6. 作对	（　　）形容人的精神状态好 （　　）比喻一个事物随着另一事物变化而变化 （　　） 不合作

6. Vocabulary Synonym Test

Instruction: please choose the synonym for each word.

قم من فضلك باختيار الكلمة التي لها نفس المعنى.

请选出每个词的同义词。

Number	Word	a	b	c	d	Answer
Example مثال	父亲	爸爸	爷爷	斧头	交通	a
1	办法	a. 法律	b. 办公	c. 方法	d. 途径	
2	差别	a. 差生	b. 别人	c. 距离	d. 不同	
3	出境	a. 出国	b. 境况	c. 环境	d. 处理	
4	帮助	a. 帮工	b. 帮忙	c. 匪帮	d. 助理	
5	登山	a. 高山	b. 登对	c. 爬山	d. 登顶	
6	富翁	a. 丰富	b. 富人	c. 富饶	d. 致富	
7	必须	a. 胡须	b. 需要	c. 紧急	d. 必定	
8	孤独	a. 孤立	b. 独处	c. 孤单	d. 独立	
9	焦急	a. 焦虑	b. 急救	c. 焦灼	d.着急	
10	不错	a. 挺好	b. 不对	c. 错误	d. 不行	
11	渐渐	a. 重重	b. 油油	c. 慢慢	d. 轻轻	
12	论述	a. 论文	b. 论点	c.论证	d. 论坛	
13	大夫	a. 大人	b. 医生	c. 夫人	d. 护士	
14	联络	a. 网络	b. 联系	c. 关系	d. 联合	
15	确信	a. 坚信	b. 轻信	c. 确实	d. 确切	
16	懂得	a. 得到	b. 明白	c. 懂事	d. 相信	
17	期望	a. 失望	b. 希望	c. 期末	d. 欺负	
18	体谅	a. 体操	b. 体育	c. 原谅	d. 谅解	
19	饭店	a. 教室	b. 商店	c. 吃饭	d. 餐厅	
20	省钱	a. 花钱	b. 省心	c. 节约	d. 小气	
21	兴高采烈	a. 欢天喜地	b. 无精打采	c. 垂头丧气	d. 兴兵动众	
22	根本	a. 树根	b. 书本	c. 跟前	d. 基础	
23	特征	a. 长征	b. 征途	c. 特点	d. 特色	
24	赞许	a. 赞助	b. 允许	c. 赞扬	d. 许多	
25	觉得	a. 睡觉	b. 认为	c. 同意	d. 获得	
26	愉快	a. 开心	b. 快速	c. 偷渡	d. 放松	
27	诧异	a. 宅男	b. 差异	c. 惊讶	d. 呆萌	
28	想法	a. 想象	b. 主意	c. 理解	d. 做法	
29	壮观	a. 壮丽	b. 乐观	c. 壮大	d. 外观	
30	通宵	a. 通知	b. 宵夜	c. 整夜	d. 一年	

7. Morpheme Discrimination Test.

Instruction: The following words in each line share the same character. Please choose the word where the character has a different meaning.

الكلمات ادناه في كل صف بها نفس الرمز. قم من فضلك باختيار الكلمة التي تحمل معنى مختلف.

下面每一行的三个词拥有同样的汉字。请选择词素含义不同的词。

	a	b	c	Answer
e.g. مثال	a. **手**套	b. **手**续	c. **手**工	b
1	a. **信**号	b. **信**任	c. **信**息	
2	a. **小**学	b. **小**声	c. **小**姐	
3	a. **照**片	b. **照**顾	c. **照**相	
4	a. **商**量	b. **商**业	c. **商**品	
5	a. **面**粉	b. **面**前	c. **面**对	
6	a. **加**入	b. **加**油	c. **加**工	
7	a. **护**士	b. **护**照	c. **护**理	
8	a. **本**地	b. **本**科	c. **本**国	
9	a. **彩**电	b. **彩**票	c. **彩**色	
10	a. **发**票	b. **发**展	c. **发**扬	
11	a. **风**速	b. **风**向	c. **风**度	
12	a. **机**器	b. **机**遇	c. **机**械	
13	a. **基**础	b. **基**石	c. **基**督	
14	a. **精**美	b. **精**品	c. **精**力	
15	a. **亲**爱	b. **亲**密	c. **亲**眼	
16	a. **中**外	b. **中**药	c. **中**学	
17	a. **好**心	b. **好**评	c. **好**笑	
18	a. **起**源	b. **起**初	c. **起**草	
19	a. **陶**瓷	b. **陶**醉	c. **陶**器	
20	a. **通**告	b. **通**风	c. **通**过	

8. Compound Structure Discrimination Test.

Instruction: please choose the word whose characters go together in a similar way to the target word.

قم من فضلك باختيار الكلمة التي تشابه الكلمة المستهدفة في التركيب.

请选出和目标词结构相似的词。

Target word	a	b	c	Answer
e. g. 喝水	出去	睡觉	肥胖	b
美丽	a. 艰难	b. 打死	c. 青山	
长城	a. 爱好	b. 安静	c. 春天	
出国	a. 答应	b. 发言	c. 根本	
感到	a. 公路	b. 吃完	c. 关心	
快餐	a. 留下	b. 篮球	c. 流行	
记住	a. 坚强	b. 做好	c. 家人	
破坏	a. 骑车	b. 气温	c. 剪断	
食物	a. 设计	b. 收费	c. 玩具	
头脑	a. 校长	b. 痛苦	c. 晚安	
重点	a. 英语	b. 资金	c. 转变	
走开	a. 做到	b. 座位	c. 今天	
门票	a. 领导	b. 名单	c. 离开	
交费	a. 京剧	b. 开会	c. 解开	
继续	a. 加油	b. 检查	c. 画家	
初级	a. 变成	b. 吃饭	c. 菜单	

9. The Word Order Test

Instruction: please put the following segments in order to form a sentence. You can add punctuation when it is necessary.

قم من فضلك بترتيب الكلمات أدناه لتصبح جملاً . بإمكانك إضافة علامة الترقيم إذا كان ضرورياً.

请把下面的部分排序，组成一个句子。您可以在需要的时候添加标点符号。

E.g. ①我 ②心情 ③好 ④非常 ⑤ 今天 。
Answer الاجابة : ① ⑤ ② ④ ③
1. ①桌子 ②放着 ③书 ④上 ⑤ 一本
Answer الاجابة :
2. ①地方 ②很多 ③云南 ④在 ⑤玩了 ⑥他
Answer الاجابة :
3. ①对 ② 小王 ③兴趣 ④工作 ⑤ 自己的 ⑥没
Answer الاجابة :
4. ①就 ②马上 ③了 ④要 ⑤超市 ⑥关门
Answer الاجابة :
5. ①刚才 ②很冷 ③明天 ④说 ⑤电视里 ⑥天气
Answer الاجابة :
6. ①环境 ②越来越好 ③城市的 ④变得 ⑤这个 ⑥了
Answer الاجابة :
7. ①那 ②不 ③衣服 ④ 他的 ⑤是 ⑥件
Answer الاجابة :
8. ①快乐 ②怎么变 ③寻找快乐的心 ④不管 ⑤大环境 ⑥一种习惯 ⑦其实是
Answer الاجابة :
9. ①再检查 ②看 ③你 ④ 有没有 ⑤ 最好 ⑥还 ⑦一下 ⑧问题
Answer الاجابة :
10. ①很快 ②女朋友 ③恢复了④照顾下 ⑤他 ⑥在 ⑦健康 ⑧的
Answer الاجابة :
11. ①都有 ②幸福 ③的 ④理解，⑤含义 ⑥对于 ⑦不同的 ⑧每个人
Answer الاجابة :
12. ①几个朋友 ②开车 ③周末 ④都不会，⑤我的 ⑥想去郊游 ⑦他们 ⑧但是
Answer الاجابة :
13. ①在使用上 ②进餐工具 ③最主要的 ④中餐，⑧也有 ⑤筷子是 ⑥讲究 ⑦很多
Answer الاجابة :
14. ①都应该 ②成功 ③获得 ④失败，⑤努力过的人 ⑥无论 ⑦还是 ⑧鲜花和掌声
Answer الاجابة :
15. ①中国的 ②代替父亲 ③女英雄 ④ 而闻名天下⑤花木兰是 ⑥以 ⑦并打败入侵敌人 ⑧参加军队
Answer الاجابة :

10. The Grammaticality Judgment Test

Instruction: There is one grammatical error in each sentence. Please underline the ungrammatical part and provide a correction. You can delete the error part, replace it with a different word/character, or move its location.

هناك خطأ نحوي في كل جملة , قم من فضلك بوضع خط تحت الجزء الخطأ و صححه . بإمكانك أن تحذف الجزء الخطأ و تستبدله بأي كلمة أو رمز آخر أو تبديل مكانه في الجملة.

下面每个句子都有一个语法错误。请在错误的部分下面划线并改正。你可以删除错误部分，用其他词/字替换，或改变错误部分的位置。

E.g. 除了小王以外，我们班的同学还会说日语。
Correction: : تصحيح change 还 to 都
1.我是 2015 年去中国了。
Correction تصحيح :
2. 已经 11 点了，我估计他今天一定不会来参观画展了。
Correction تصحيح :
3. 难道你连这个规定还不知道吗？
Correction تصحيح :
4. 你吃饭过没有？
Correction تصحيح :
5. 你什么没去看电影？
Correction تصحيح :
6. 这个客厅大是大，不过坐得下十个人。
Correction تصحيح :
7. 我的面包把狗吃了。
Correction تصحيح :
8. 我的姐姐比你的姐姐很美。
Correction تصحيح :
9. 爸爸花了一个小时把早饭准备成了。
Correction تصحيح :
10. 她笑了对我说,“我爱你！”
Correction تصحيح :
11. 给我打电话还是发短信都可以。
Correction تصحيح :
12. 昨天我见了我的女朋友，今天我再要跟她见面。
Correction تصحيح :
13. 小美哭得两双眼睛都变红了。
Correction تصحيح :
14. 丽丽的男朋友是很帅。
Correction تصحيح :
15. 你做的很对，不要在乎别人怎么想。
Correction تصحيح :
16. 学校向我家很近。
Correction تصحيح :

11.Multiple Choice Test

Instruction: please read the following passages and answer the questions.

قم من فضلك بقراءة القطع أدناه وأجب على الاسئلة.

请阅读下面的文章，并回答问题。

Passage 1

我的左邻过去是一位歌星，天天躲在房子里听她自己当年演唱的唱片。右邻是一位退休的教授，天天喃喃地祈祷着什么。在我的想象中，这位教授一定很老了。

事实却不是这样的，我发现 70 岁的教授精神很好，走路时步子轻快，眼睛里闪着喜悦的光。可是那位歌星，40 多岁就已经精神很不好，腿脚也不灵便了。

原来这位歌星天天回忆过去美好的日子，对现在的生活很不满意 。而老教授虽然不再教书了，退休后却又开始学习拉丁文。他说：“每多认识一个生字，我就觉得年轻了一岁。”我听到的“祈祷”声，其实就是他的读书声。

According to the above passage, please mark the statements 1-5 with (T) if it is true or (F) if it is false.

وفقا للقطعة اعلاه قم بتحديد اذا كانت الاجابة صحيحة ام خاطئة :

1. 教授的年龄比歌星大。( )
2. 歌星的精神比教授好。 ( )
3. 这位歌星不喜欢自己现在的生活。( )
4. 教授每天很忙，因为他要教学生。( )
5. 教授身体好是因为他每天祈祷。( )

Passage 2

从前，在一座很大的森林里住着很多动物。森林里有一只老虎，他是这座森林里最强壮的动物，所有的动物都害怕它，一看到老虎来了，就都跑得远远的，这只老虎非常得意，它经常在森林里走来走去，觉得自己真了不起。

有一天，老虎正在森林走着，忽然一只狐狸从树丛里跳了出来，跳到老虎面前。原来这只狐狸没有看到老虎。老虎很生气，它一把捉住这只大胆的狐狸，要把狐狸吃了。

狡猾的狐狸看到自己已经不能从老虎手里逃走了，就想出了一个办法。它对老虎说："你不能吃我！"老虎愣住了，就问："为什么？"狐狸说："玉皇大帝（Jade Emperor）派我来当这个森林的大王，谁敢吃我? 如果你不相信，我们一起在森林里走一走，看看动物们怕不怕我？"

老虎同意了。他让狐狸走到前面，自己跟在后面。 动物们看到老虎跟在狐狸的后面，都吓得赶快逃走了。这时，狐狸得意地对老虎说："看到了吗？动物们都怕我呢！"老虎也认为动物们现在怕的是狐狸，只好把狐狸放走了。

6.下面哪项是正确的 (　　)

A 老虎是最强壮的动物之一　　B 动物们都喜欢跑步

C 老虎喜欢跑来跑去　　D 动物们害怕老虎

7. 狐狸跳到老虎前面是因为：(　　)

A 它想吃老虎　　B 它想吓老虎

C 它没看见老虎　　D 它对老虎很生气

8. 第三段的"愣住"最可能的意思是：(　　)

A 笑　　B 伤心　　C 生气　　D 呆

9. 老虎放了狐狸是因为: (　　)

A 狐狸是森林的大王　　B 动物们都怕狐狸

C 老虎怕玉皇大帝　　D 老虎以为动物怕狐狸

10. 根据上文，可以知道老虎：(　　)

A 很胆小　　B 很友好　　C 很糊涂　　D 很善良

Passage 3

记得十年前一个寒冷的冬天，我住在屏东市一家满是臭虫的旅店。为了看内埔乡稻田的日出，我凌晨四点就从旅店出发，赶到内埔乡时天色还是昏暗的，我就躺在田埂边的草地上等候，没想竟昏沉沉地睡去了，醒来的时候日头已近中天。

我捶胸顿足，想到走了一个小时的夜路，难过得眼泪差一点落下来。正在这时，我看到田中的秧苗反射着阳光，田地因干旱而显出的裂纹，连绵到天边，有非常之美，是我从未见过的景象。我立即转悲为喜，感觉到如果能不执着，心境就会美好得多。

这时，一位农夫走来，好意地请我喝水，当他知道我是来看日出的美景时，抬头望着天空出神地说："如果能下雨，就比日出更美了。"我问他下雨有什么美，他说："这里闹干旱已经两个月了，没有下过一滴雨——日出有什么好呢？"我听了心里一惊，非常惭愧，以一种悔罪的心情看着天空的烈日，很能感受到农夫的忧伤。

后来，我和农夫一起向天空祈求下雨，我深切地感悟到：离开真实的生活，世间一切的美都显得虚幻不实。

11. "我"去屏东市干什么? (　　)

A 去看田中的秧苗　　B 去稻田看日出

C 去看农夫朋友　　D 去祈求天空下雨

12. "我"是什么时候醒来的？(　　)

A 凌晨四点钟　　B 快中午的时候

C 凌晨五点钟　　D 一小时以后

13. "我"为什么"捶胸顿足"？(　　)

A 走路走得太久了　　B 走夜路走得太累了

C 睡过头了　　D 太难过了

14. 下列哪项说法正确？(　　)

A 农夫不知道我来做什么　　B 我非常想喝水

C 稻田里很久没下雨了　　D 我和农夫都喜欢日出

15. 这个故事主要告诉我们什么？(　　)

A 人不能太执着　　B 下雨比日出更美

C 要多感受别人的悲伤　　D 美离不开真实的生活

Passage 4

相关研究显示，由于我国农村地区的青少年儿童食用越来越多高糖和高热量食品，肥胖比例呈快速增长。肥胖问题已非城里人和成年人的“专利”，农村青少年儿童正面临肥胖的侵袭。不同于城市，农村的儿童肥胖，有其独特的原因。

首先，随着农民收入水平提高，农村的饮食结构发生了变化。传统的清淡饮食开始向高脂肪、高热量、低纤维方向转变。“在农村，一些人觉得多吃油、多吃肉对身体好，有营养。”刘璐说，“此外，热量高的糕点和含糖饮料，也是诱发农村儿童肥胖的重要原因。”

记者调查发现，甜饮料、糕点在农村家庭很常见，成了孩子的主要零食。与此同时，在不少农村小卖部，“奥利奥”变成了“奥和奥”，“营养快线”变成了“营养干线”。一些专家表示，用料低劣、着色剂滥用、添加剂超标的假冒伪劣食品，也是造成农村儿童肥胖的重要原因。

其次，记者调查发现，农村健康营养知识匮乏。中国学生营养与健康促进会发布的《中国儿童少年营养与健康报告》显示，多数人不知道什么食物真正有营养，把鸡蛋卖了换方便面, 零食，用胡萝卜喂家禽。

“家长投其所好，孩子爱吃什么就买什么。许多家长以孩子不喜欢吃为由，放弃了培养孩子吃蔬菜、水果的饮食习惯，而选择了含糖饮料、油炸食品。”河南平舆县一名乡村教师说。

再次，受“小孩胖点好”的农村传统观念影响。“多吃一碗饭，多穿一尺布”是大部分农村老人对于肥胖的理解。加上追食、诱食、逼食等错误普遍存在的喂养方式，导致农村胖墩也越来越多。

“不少农村老人认为把孩子养得胖乎乎的是件好事，完全不知道胖是疾病的前期症状。”河南省肿瘤医院医生庄昊说，儿童肥胖如果不能及时控制和改善，严重的会得糖尿病、代谢紊乱等疾病。

16.农村人拿胡萝卜喂家禽说明了什么？(　　)

A 胡萝卜种得太多　　B 胡萝卜不好吃

C 胡萝卜没有营养　　D 农村人缺少营养知识

17. “多吃一碗饭，多穿一尺布”表明了农村老人的什么态度？(　　)

A 吃得多的话衣服也要穿大号的　　B 吃得多一点没有什么关系

C 吃得多的话孩子穿衣服不好看　　D 吃得多的话养育孩子很艰难

18.下面哪种食品最有可能存在质量问题？(　　)

A 奥利奥　　B 营养干线　　C 甜饮料　　D 糕点

19.第四段的匮乏最有可能的意思是什么? (　　)

A 丰富　　B 昂贵　　C 不足　　D 错误

20.上文主要介绍了：(　　)

A 导致肥胖的食品泛滥　　B 肥胖问题的严重后果

C 农村儿童肥胖的原因　　D 农村的不良生活习惯

12.Cloze Test

Please fill in the following blanks with **only one** Chinese character. If you don't know how to write the character, please write down pinyin with tones.`

قم من فضلك بملء الفراغات أدناه برمز واحد, واذا لك تستطع من كتابة الرمز قم من فضلك بكتابته بالهجاء و النغمات.

Passage 1

森林里，动物们决定举办一个晚会，这次演出吸引了几乎所有的动物。他们都很积极,___ 备的节目各有___点，小鸟要给大___唱歌，老虎要跳___，小猫要画画儿，___羊要讲故事，狮___说他给大家照___，熊猫说："我不会___演，但是我可以___观众，为大家鼓___。"最后只剩下小___了，她想了好久，___ 然得意地说："我___责为大家送免___的牛奶！"

Passage 2

一个年轻人获得一份销售工作，勤勤恳恳干了大半年，却接连失败。而他的同事，个___都干出了成绩。___实在忍受不了___种痛苦。在总经___办公室，他惭愧___ 说，可能自己不___合这份工作。"安___工作吧，我会给___足够的时间，直___你成功为止。到___时，你再要走我___留你。"老总的宽___让年轻人很感___。他想，总该做出___两件像样的事___后再走。 过了一___，年轻人又走进___老总的办公室。___一次他是轻松___，他已经连续 7___月在公司销售___行榜中高居榜___。原来，这份工作___那么适合他！

Appendix C: Consent forms in English, Chinese, Russian and Arabic

University of Hawai'i

Consent to Participate in Research Project:

Component Skills of Reading among Learners of Chinese as a Second Language

My name is Jing Zhou, a PhD student at the University of Hawai'i at Manoa (UH), in the Department of Second Language Studies. As one of my interests, I conduct research. The purpose of this research project is to examine what components contribute to reading in Chinese among learners of Chinese as a second language. In addition, the study intends to examine the interconnections among different components. I am asking you to participate in this project because you are or were learners of Chinese as a second language.

Activities and Time Commitment: If you participate, you will take a test in Chinese. The test will examine your radical knowledge, character recognition, morphological knowledge, syntactic knowledge, and reading comprehension ability in Chinese. You will also need to fill in a brief background information survey. The whole process will take around 2 hours. If you indicate you are willing to be interviewed or participate in focus group discussion, you will also be interviewed for around 10 minutes, or participate in a focus-group discussion for around 20 minutes.
Benefits and Risks: There may be no direct benefits to you in participating in my research project. The results of this project might help me and other researchers learn more about reading in a logogriphic writing system like Chinese. I believe there is little or no risk to you in participating in this project.
Confidentiality and Privacy: I will keep all information (test scores, background information survey) in a safe place. Only I will have access to the information. Other agencies that have legal permission have the right to review research records. The University of Hawai'i Human Studies Program has the right to review research records for this study.
Voluntary Participation: Participation in this research project is voluntary. You are free to choose to participate or not to participate in this project. At any point during this project, you can withdraw your permission without any loss of benefits.
You will receive a gift with a value of around10 dollars (around a value of 65 RMB for the participant is in China) for your time and effort in participating in this research project.
Questions: If you have any questions about this project, please contact me via phone (808) 387-3673 or e-mail (jingzhou@hawaii.edu). If you have further questions, you can also contact my advisor Professor Richard Day via e-mail (rday@hawaii.edu).

If you have any questions about your rights in this project, you can contact the University of Hawai'i, Human Studies Program, by phone at (808) 956-5007 or by e-mail at uhirb@hawaii.edu.

Please keep the section above for your records.
If you agree to participate in this project, please sign the following signature portion of this consent form and return it to Jing Zhou.

Tear or cut here

Signature(s) for Consent:

I give permission to join the research project entitled, *Component Skills of Reading among Learners of Chinese as a Second Language*

Please initial next to either "Yes" or "No" to the following:

_____ Yes _____ No I consent to participate in this research

I give permission to be interviewed and participate in focus group discussion.

Please initial next to either "Yes" or "No" to the following:

_____ Yes _____ No I consent to be interviewed and participate in focus group discussion.

Name of Participant (Print): _____

Participant's Signature: _____

Signature of the Person Obtaining Consent: _____

Date: _____

夏威夷大学
参加以下研究项目同意书：
中文作为第二语言学习者阅读的构成因素

我叫周静，是美国夏威夷大学马诺阿分校第二语言习得系的博士生。 这个研究项目的目的是考察对以中文作为外语的学生而言，哪些因素在中文阅读中起作用。 同时，这个研究考察不同因素之间的相互关系。我希望你们参加这个研究是因为你们是学习中文的学生。

调查内容和时间：如果您参加这个研究，您会参加一个汉语考试。考试会考察您的偏旁部首知识，汉字识别，词汇知识，语法知识，和中文的阅读理解能力。您也需要填写一个简短的背景信息问卷。整个考试过程大概需要 2 个小时。如果您愿意被采访或参加小组讨论， 您也会被访问大概 10 分钟，或参加一个小组讨论，大概需要 20 分钟。

好处和风险： 参加这个研究对您可能没有直接的好处，但是这个研究的结果能帮助我和其他的研究者了解中文阅读。我相信参加这个研究您基本没有或没有风险。

保密和隐私：我会把所有的信息（考试成绩，背景信息问卷）保存在一个安全的地方。只有我能接触到这些信息。其他获得法律允许的机构有权利查看考试记录。夏威夷大学人类研究项目也有权查看考试记录。

自愿参加：参加这个研究是自愿的。您可以选择参加或者不参加。在参加本研究的任何时候，您都可以选择退出。

问题： 如果您有任何问题，请电话联系 （808）387-3673 或发送电子邮件 (jingzhou@hawaii.edu). 如果您还有别的问题，您可以联系我的导师 Richard Day (rday@hawaii.edu).

如果您参加这项研究，为了感谢您的时间付出，您将获得价值约为 10 美元的礼物。
如果您对您的权利有任何问题，请联系夏威夷大学人类研究项目， 电话(808) 956-5007 或邮件 uhirb@hawaii.edu.

请您保留上面的部分。
如果您愿意参加这个研究，请您在下面的签字部分签名并把这部分交给周静。

Tear or cut here

同意参加：

我同意参加研究: 中文作为第二语言学习者阅读的构成因素

请在 Yes 或 No 前面打勾

_____ Yes　　_____ No　　我同意参加这个研究

我同意被采访或者参加小组讨论:

请在 Yes 或 No 前面打勾

_____ Yes　　_____ No　　我同意被采访或者参加小组讨论

参加者签名: _____

获得同意人员签名: _____

日期: _____

Университет Hawai'i

Согласие на участие в исследовательской работе

«Компоненты, влияющие на навыки

чтения на китайском языке , как иностранном»

Меня зовут Zhou Jing . Я учусь в докторантуре в университете Hawai'i в Manoa (UH) на факультете изучения второго иностранного языка. Из интереса я организую данную исследовательскую работу. Цель этой работы состоит в определении элементов, влияющих на чтение по китайски для людей, изучающих китайский язык, как иностранный. Кроме того, изучение взаимосвязи между этими элементами тоже является одной из целей этой работы. Я приглашаю вас участвовать в этой работе, потому что вы изучаете китайский язык, как иностранный.

Содержание и время работы: Если вы будете участвовать в проекте,то у вас будет тест по китайскому языку. Этот тест проверяет ваши знания о ключевых показателях иероглифов, запас слов, морфологические и синтаксические знания, а так же способность чтения на китайском языке. У вас тоже будет короткое исследование по вспомогательной информации. Всё это займет у вас 2 часа. Если вы согласитесь на интервью или участие в групповой дискуссии, интервью отнимет у вас приблизительно 10 минут, а групповая дискуссия – 20 минут.

Польза и риск: Если вы примите участие в этом исследовании, для вас не будет непоследовательных интересов, но результаты этой работы, может быть, помогут мне и другим исследователям узнать больше о чтении в логографической системе писания, как в китайском языке. Я уверена, что здесь не существует никакого риска для вас.

Секретность и личность: Я сохраню всю информацию в безопасном месте. Только у меня будет доступ к этой информации. Другие организации и лица, только получив законное разрешение, имеют право читать записи исследования. Университет Hawaii, по

программе изучения человечества имеют право изучать записи исследования с целью изучения.

Добровольное участие: Участие в данном исследовании является добровольным. Вы имеете право участвовать или не участвовать в исследовании. Во время исследования вы в любой момент имеете право отказываться от дальнейшего участия в исследовании, если возникнет такая необходимость.

Вопросы: Если у вас будут какие-нибудь вопросы об этом исследовании, контактируйте со мной. Мой номер телефона (808) 387-3673) и e-mail (jingzhou@hawaii.edu). Если у вас возникнут вопросы более серьёзного характера, вы можете написать моему научному руководителю Day на e-mail (rday@hawaii.edu).

Если у вас возникнут какие-либо правовые вопросы, связанные с данным исследованием, вы можете контактировать с администрацией университета Hawaii, работающей по программе изучения человечества . Номер телефона (808) 956-5007 и e-mail uhirb@hawaii.edu.

Please keep the section above for your records.

Åñëè âû ñîãëàñèòåñü íà ó÷àñòèå â ýòîì èññëåäîâàíèè, ïîäïèøèòå ôîðìó çàÿâëåíèÿ î

âûðàæåíèè ñîãëàñèÿ è îòäàéòå å¸ Zhou Jing.

Tear or cut here

Подпись:

Я согласен(согласна) участвовать в исследовании «Компоненты, влияющие на навыки чтения на китайском языке , как иностранном»

Âûáåðèòå“Yes”èëè“No”:

_____ Yes _____ No *Я согласен(согласна) участвовать в этом исследовании.*

Я согласен(согласна) дать интервью или участвовать в групповой дискуссии.

Âûáåðèòå“Yes”èëè“No”:

_____ Yes _____ No *Я согласен(согласна) дать интервью или участвовать в групповой дискуссии.*

Ô. È. Î. ó÷àñòâóþùåãî: _____

Ïîäïèñü ó÷àñòâóþùåãî: _____

Ñîãëàñèå íà ó÷àñòèå â ýòîì èññëåäîâàíèè (ïîäïèñü): _____

Äàòà: _____

University of Hawai'i
جامعة هاواي

Consent to Participate in Research Project:
موافقة على المشاركة في مشروع البحث

Component Skills of Reading among Learners of Chinese as a Second Language

My name is Jing Zhou, a PhD student at the University of Hawai'i at Manoa (UH), in the Department of Second Language Studies. As one of my interests, I conduct research. The purpose of this research project is to examine what components contribute to reading in Chinese among learners of Chinese as a second language. In addition, the study intends to examine the interconnections among different components. I am asking you to participate in this project because you are or were learners of Chinese as a second language.

أسمي هو جو جنغ , طالبة دكتوراه في جامعة هاواي في مانوها , في قسم دراسة اللغة الثانية , كأحدي اهتماماتي , أجريت بحث. والغرض من كتابتي لهذا البحث هو لاختبار ما هي العناصر التي تشارك في دراسة اللغة الصينية كلغة أجنبية. إضافة إلى ذلك تهدف الدراسة إلى اختبار الترابط عبر عناصر عده . وأنا أطلب منكم المشاركة في هذا المشروع بصفتكم دارسين للغة الصينية كلغة أجنبية.

Activities and Time Commitment: If you participate, you will take a test in Chinese. The test will examine your radical knowledge, character recognition, morphological knowledge, syntactic knowledge, and reading comprehension ability in Chinese. You will also need to fill in a brief background information survey. The whole process will take around 2 hours. If you indicate you are willing to be interviewed or participate in focus group discussion, you will also be interviewed for around 10 minutes, or participate in a focus-group discussion for around 20 minutes.

النشاطات و الالتزام بالزمن : إذا قمت بالمشاركة , سيتم اختبارك في اللغة الصينية . سيفحص الاختبار مدى معرفتك بالجذور , و تمييز الرموز , ومعرفتك بالتركيب , و المعرفة النحوية و قدرتك على قراءة و فهم اللغة الصينية . ستأخذ العملية حوالي ساعتين . و اذا كنت توافق على اجراء مقابلة أو المشاركة في مناقشة مجموعة التركيز , ستجرى مقابلة معك لمدة عشر دقائق , أو ستشارك في مناقشة مجموعة التركيز لمدة عشرون دقيقة.

Benefits and Risks: There may be no direct benefits to you in participating in my research project. The results of this project might help me and other researchers learn more about reading in a logogriphic writing system like Chinese. I believe there is little or no risk to you in participating in this project.

الفوائد و الأخطار : ربما لن تكون هناك فوائد مباشرة بالنسبة لك اذا قمت بالمشاركة في مشروعي هذا . النتائج المأخوذة من هذا البحث ستساعدني أنا و مجموعة أخرى من الباحثين في نظام كتابة لوغو ريفي مثل اللغة الصينية . و أنا أؤمن بأنه لن تكون هناك أي مخاطر بالنسبة لك بالمشاركة في هذا المشروع .

Confidentiality and Privacy: I will keep all information (test scores, background information survey) in a safe place. Only I will have access to the information. Other agencies that have legal permission have the right to review research records. The University of Hawai'i Human Studies Program has the right to review research records for this study.

الخصوصية و السرية: سأحتفظ بكل من (درجات الاختبار و المعلومات الشخصية) في مكان آمن . أنا فقط من يتاح لها الدخول الى المعلومات . أو الجهات الاخرى التي تحمل إذنا رسميا برؤية النتائج . و جامعة هاواي للدراسات الانسانية لديها الاحقية في مراجعة نتائج البحث لدراستها .

Voluntary Participation: Participation in this research project is voluntary. You are free to choose to participate or not to participate in this project. At any point during this project, you can withdraw your permission without any loss of benefits.
You will receive a gift with a value of around 10 dollars (around a value of 65 RMB for tthe participant in China) for your time and effort in participating in this research project.
المشاركة الطوعية : المشاركة في هذا المشروع هي طوعية . لك حرية الاختيار في المشاركة في هذا المشروع أو عدمه , و في نقطة خلال هذا المشروع يمكنك استرجاع إذنك بدون أي خسائر .
ستمنح جائزة كرت بقيمة عشر دولارات (أي حوالي خمس و ستون يوان صيني اذا كانت المشاركة في الصين) تمثل جهدك و زمنك للمشاركة في مشروع هذا البحث .
Questions: If you have any questions about this project, please contact me via phone (808) 387-3673 or e-mail (jingzhou@hawaii.edu). If you have further questions, you can also contact my advisor Professor Richard Day via e-mail (rday@hawaii.edu).
If you have any questions about your rights in this project, you can contact the University of Hawai'i, Human Studies Program, by phone at (808) 956-5007 or by e-mail at uhirb@hawaii.edu.
الأسئلة: اذا كنت تملك أي أسئلة عن هذا المشروع, تواصل معي من فضلك عبر رقم الهاتف (3673-387) (808)أو البريد الالكتروني (jingzhou@hawaii.edu)
و اذا كنت تملك أي استفسار أخر يمكنك التواصل مع مشرفي البروفيسور ريتشارد دي عبر البريد الالكتروني (rday@hawaii.edu)
uhirb@hawaii.edu أو واذا كانت لديك أي أسئلة عن حقوك في هذا المشروع , يمكنك التواصل مع جامعة هاواي , قسم الدراسات الإنسانية , عبر الهاتف 5007-956(808) عبر البريد الالكتروني

Please keep the section above for your records.
If you agree to participate in this project, please sign the following signature portion of this consent form and return it to Jing Zhou.

Tear or cut here

قم من فضلك بإبقاء الجزء الاعلى لخياراتك.
إذا كنت توافق على المشاركة في هذا المشروع , قم بالتوقيع على مكان التوقيع و أرجع الاستبيان إلى جو جنغ .

اقطع هنا

Signature(s) for Consent:
التوقيع :

I give permission to join the research project entitled, *Component Skills of Reading among Learners of Chinese as a Second Language* *أنا اعطي الأذن بالانضمام إلى مشروع بحث بعنوان المهارات المتكونة من دراسة اللغة الصينية كلغة أجنبية .*

Please initial next to either “Yes” or “No” to the following:
ضع علامة أمام "لا" أو "نعم" في الاتي :

_____ Yes _____ No I consent to participate in this research
_____ نعم _____ لا أنا أقبل بالمشاركة في هذا البحث

I give permission to be interviewed and participate in focus group discussion.
أنا أعطي الأذن بإجراء مقابلة و المشاركة في مناقشة مجموعة التركيز

Please initial next to either “Yes” or “No” to the following:
ضع علامة أمام "لا" أو "نعم" في الاتي :

_____ Yes _____ No I consent to be interviewed and participate in focus group discussion.
ـــــــ نعم ـــــــ لا أنا أقبل بإجراء مقابلة و المشاركة في مناقشة مجموعة التركيز .

Name of Participant (Print): _____
اسم المشترك (مطبوع) : _____

Participant’s Signature: _____
توقيع المشترك :_____

Signature of the Person Obtaining Consent: _____
توقيع الشخص الذي حصل على الموافقة :_____

Date: _____
التاريخ :_____

Appendix D: Descriptive Statistics of the Twelve Tests

Table D1

Descriptive Statistics of Each Item in Receptive Semantic Radical Knowledge Test

N=134 Item	Possible range	Min	Max	Mean	SD	Skewness SE=.209	Kurtosis SE=.416
RK1	0-1	0	1	.94	.24	-3.76	12.31
RK2	0-1	0	1	.81	.40	-1.57	0.46
RK3	0-1	0	1	.82	.38	-1.69	0.88
RK4	0-1	0	1	.77	.42	-1.29	-0.34
RK5	0-1	0	1	.49	.50	0.06	-2.03
RK6	0-1	0	1	.70	.46	-0.89	-1.23
RK7	0-1	0	1	.56	.50	-0.24	-1.97
RK8	0-1	0	1	.87	.33	-2.27	3.19
RK9	0-1	0	1	.35	.48	0.63	-1.62
RK10	0-1	0	1	.49	.50	0.03	-2.03
RK11	0-1	0	1	.84	.37	-1.83	1.38
RK12	0-1	0	1	.84	.37	-1.83	1.38
RK13	0-1	0	1	.82	.38	-1.69	0.88
RK14	0-1	0	1	.89	.32	-2.49	4.26
RK15	0-1	0	1	.68	.47	-0.78	-1.42
RK16	0-1	0	1	.73	.44	-1.06	-0.90
RK17	0-1	0	1	.39	.49	0.46	-1.81
RK18	0-1	0	1	.39	.49	0.46	-1.81
RK19	0-1	0	1	.55	.50	-0.21	-1.98
RK20	0-1	0	1	.60	.49	-0.43	-1.84

Table D2

Descriptive Statistics of Each Item in Semantic Radical Meaning Matching Test

N=134 Item	Possible range	Min	Max	Mean	SD	Skewness SE=.209	Kurtosis SE=.416
RM2	1	0	1	.67	.47	-0.74	-1.48
RM3	1	0	1	.83	.38	-1.76	1.12
RM4	1	0	1	.98	.15	-6.53	41.26
RM5	1	0	1	.67	.47	-0.74	-1.48
RM6	1	0	1	.82	.38	-1.69	0.88
RM7	1	0	1	.83	.38	-1.76	1.12
RM8	1	0	1	.92	.28	-3.08	7.60
RM9	1	0	1	.38	.49	0.50	-1.78

RM10	1	0	1	.82	.38	-1.69	0.88
RM11	1	0	1	.68	.47	-0.78	-1.42
RM12	1	0	1	.75	.43	-1.19	-0.59
RM13	1	0	1	.61	.49	-0.46	-1.81
RM15	1	0	1	.74	.44	-1.10	-0.80
RM16	1	0	1	.74	.44	-1.10	-0.80
RM17	1	0	1	.57	.50	-0.27	-1.95
RM18	1	0	1	.62	.49	-0.50	-1.78
RM19	1	0	1	.60	.49	-0.40	-1.87
RM20	1	0	1	.66	.48	-0.67	-1.58

Table D3

Descriptive Statistics of Each Item in Lexical Decision Test

N=134 Item	Possible range	Min	Max	Mean	SD	Skewness SE=.209	Kurtosis SE=.416
LD1	1	0	1.00	0.99	0	-11.58	134.00
LD2	0	1	1.00	1.00	0		
LD3	1	0	1.00	0.90	0	-2.62	4.91
LD5	1	0	1.00	0.99	0	-8.09	64.44
LD6	1	0	1.00	0.98	0	-6.53	41.26
LD7	0	1	1.00	1.00	0		
LD8	1	0	1.00	0.93	0	-3.27	8.85
LD9	0	1	1.00	1.00	0		
LD10	1	0	1.00	0.93	0	-3.50	10.39
LD11	1	0	1.00	0.91	0	-2.91	6.55
LD12	1	0	1.00	0.51	1	-0.03	-2.03
LD13	1	0	1.00	0.62	0	-0.50	-1.78
LD14	1	0	1.00	0.84	0	-1.91	1.67
LD15	1	0	1.00	0.92	0	-3.08	7.60
LD16	1	0	1.00	0.90	0	-2.75	5.67
LD17	1	0	1.00	0.78	0	-1.39	-.06
LD18	1	0	1.00	0.79	0	-1.45	.10
LD19	1	0	1.00	0.95	0	-4.07	14.79
LD20	1	0	1.00	0.99	0	-8.09	64.44
LD21	1	0	1.00	0.96	0	-4.94	22.72
LD22	1	0	1.00	0.95	0	-4.07	14.79
LD23	1	0	1.00	0.90	0	-2.62	4.91
LD24	1	0	1.00	0.97	0	-5.59	29.67
LD25	1	0	1.00	0.98	0	-6.53	41.26

LD26	1	0	1.00	0.90	0	-2.62	4.91
LD27	1	0	1.00	0.86	0	-2.08	2.35
LD28	1	0	1.00	0.82	0	-1.69	.88
LD29	1	0	1.00	0.89	0	-2.49	4.26
LD30	1	0	1.00	0.87	0	-2.17	2.75
LD31	1	0	1.00	0.97	0	-5.59	29.67
LD32	1	0	1.00	0.72	0	-1.01	-.99
LD33	1	0	1.00	0.85	0	-1.99	1.99
LD34	1	0	1.00	0.76	0	-1.24	-.47
LD35	1	0	1.00	0.78	0	-1.39	-.06
LD36	1	0	1.00	0.66	0	-0.70	-1.53
LD38	1	0	1.00	0.97	0	-5.59	29.67
LD39	1	0	1.00	0.66	0	-0.67	-1.58

Table D4

Descriptive Statistics of Each Item in Character Knowledge Test

N=134 Item	Possible range	Min	Max	Mean	SD	Skewness SE=.209	Kurtosis SE=.416
CK1	1	0	1	.99	.12	-8.09	64.44
CK2	1	0	1	.81	.39	-1.63	0.66
CK3	1	0	1	.54	.50	-0.18	-2.00
CK4	1	0	1	.90	.30	-2.75	5.67
CK5	1	0	1	.86	.35	-2.08	2.35
CK6	1	0	1	.36	.48	0.60	-1.67
CK7	1	0	1	.63	.49	-0.53	-1.74
CK8	1	0	1	.96	.21	-4.45	18.09
CK9	1	0	1	.44	.50	0.24	-1.97
CK10	1	0	1	.80	.40	-1.51	0.27
CK11	1	0	1	.47	.50	0.12	-2.02
CK12	1	0	1	.98	.15	-6.53	41.26
CK13	1	0	1	.87	.33	-2.27	3.19
CK16	1	0	1	.74	.44	-1.10	-0.80
CK17	1	0	1	.90	.30	-2.75	5.67
CK18	1	0	1	.98	.15	-6.53	41.26
CK19	1	0	1	.76	.43	-1.24	-0.47
CK20	1	0	1	.91	.29	-2.91	6.55
CK21	1	0	1	.98	.15	-6.53	41.26
CK22	1	0	1	.92	.28	-3.08	7.60
CK23	1	0	1	.64	.48	-0.60	-1.67

CK24	1	0	1	.63	.49	-0.53	-1.74
CK25	1	0	1	.44	.50	0.24	-1.97
CK26	1	0	1	.87	.34	-2.17	2.75
CK27	1	0	1	.80	.40	-1.51	0.27
CK29	1	0	1	.70	.46	-0.89	-1.23

Table D5

Descriptive Statistics of Each Item in Receptive Vocabulary Knowledge Test

N=134 Item	Possible range	Min	Max	Mean	SD	Skewness SE=.209	Kurtosis SE=.416
VK2	1	0	1	.96	.21	-4.45	18.09
VK3	1	0	1	.43	.50	.31	-1.94
VK5	1	0	1	.37	.49	.53	-1.74
VK6	1	0	1	.78	.42	-1.34	-.21
VK7	1	0	1	.67	.47	-.74	-1.48
VK8	1	0	1	.94	.24	-3.76	12.31
VK9	1	0	1	.93	.25	-3.50	10.39
VK10	1	0	1	.85	.36	-1.99	1.99
VK11	1	0	1	.54	.50	-.15	-2.01
VK12	1	0	1	.86	.35	-2.08	2.35
VK13	1	0	1	.55	.50	-.21	-1.98
VK14	1	0	1	.48	.50	.09	-2.02
VK15	1	0	1	.60	.49	-.40	-1.87
VK16	1	0	1	.55	.50	-.21	-1.98
VK17	1	0	1	.44	.50	.24	-1.97
VK18	1	0	1	.43	.50	.31	-1.94
VK19	1	0	1	.87	.33	-2.27	3.19
VK20	1	0	1	.95	.22	-4.07	14.79
VK21	1	0	1	.77	.42	-1.29	-.34
VK22	1	0	1	.40	.49	.43	-1.84
VK23	1	0	1	.33	.47	.74	-1.48
VK24	1	0	1	.40	.49	.40	-1.87
VK25	1	0	1	.78	.41	-1.39	-.06
VK26	1	0	1	.72	.45	-.97	-1.07
VK27	1	0	1	.25	.43	1.19	-.59
VK29	1	0	1	.43	.50	.31	-1.94

Table D6

Descriptive Statistics of Each Item in Vocabulary Synonym Test

N=134 Item	Possible range	Min	Max	Mean	SD	Skewness SE=.209	Kurtosis SE=.416
VS1	1	0	1	.94	.24	-3.76	12.31
VS2	1	0	1	.87	.34	-2.17	2.75
VS3	1	0	1	.44	.50	0.24	-1.97
VS4	1	0	1	.97	.17	-5.59	29.67
VS5	1	0	1	.74	.44	-1.10	-0.80
VS6	1	0	1	.57	.50	-0.27	-1.95
VS7	1	0	1	.43	.50	0.27	-1.95
VS8	1	0	1	.63	.49	-0.53	-1.74
VS9	1	0	1	.65	.48	-0.63	-1.62
VS10	1	0	1	.96	.19	-4.94	22.72
VS11	1	0	1	.73	.44	-1.06	-0.90
VS12	1	0	1	.22	.41	1.39	-0.06
VS13	1	0	1	.80	.40	-1.51	0.27
VS14	1	0	1	.43	.50	0.31	-1.94
VS15	1	0	1	.32	.47	0.78	-1.42
VS16	1	0	1	.83	.38	-1.76	1.12
VS17	1	0	1	.73	.44	-1.06	-0.90
VS18	1	0	1	.27	.44	1.06	-0.90
VS19	1	0	1	.89	.32	-2.49	4.26
VS20	1	0	1	.67	.47	-0.74	-1.48
VS21	1	0	1	.40	.49	0.43	-1.84
VS22	1	0	1	.68	.47	-0.78	-1.42
VS23	1	0	1	.53	.50	-0.12	-2.02
VS24	1	0	1	.39	.49	0.46	-1.81
VS25	1	0	1	.91	.29	-2.91	6.55
VS26	1	0	1	.86	.35	-2.08	2.35
VS28	1	0	1	.31	.46	0.85	-1.29
VS29	1	0	1	.19	.40	1.57	0.46
VS30	1	0	1	.23	.42	1.29	-0.35

Table D7

Descriptive Statistics of Each Item in Morpheme Discrimination Test

N=134 Item	Possible range	Min	Max	Mean	SD	Skewness SE=.209	Kurtosis SE=.416
MD1	1	0	1	.57	.50	-.27	-1.95
MD3	1	0	1	.85	.36	-1.99	1.99
MD4	1	0	1	.82	.38	-1.69	.88
MD5	1	0	1	.89	.32	-2.49	4.26
MD7	1	0	1	.51	.50	-.03	-2.03
MD8	1	0	1	.89	.32	-2.49	4.26
MD9	1	0	1	.34	.47	.70	-1.53
MD10	1	0	1	.62	.49	-.50	-1.78
MD11	1	0	1	.28	.45	.97	-1.07
MD12	1	0	1	.58	.50	-.34	-1.92
MD13	1	0	1	.51	.50	-.06	-2.03
MD14	1	0	1	.34	.47	.70	-1.53
MD15	1	0	1	.66	.48	-.67	-1.58
MD16	1	0	1	.34	.48	.67	-1.58
MD17	1	0	1	.37	.49	.53	-1.74
MD18	1	0	1	.46	.50	.18	-2.00
MD19	1	0	1	.43	.50	.27	-1.95

Table D8

Descriptive Statistics of Each Item in Compound Structure Discrimination Test

N=134 Item	Possible range	Min	Max	Mean	SD	Skewness SE=.209	Kurtosis SE=.416
CS3	1	0	1	.67	.47	-0.74	-1.48
CS4	1	0	1	.53	.50	-0.12	-2.02
CS5	1	0	1	.53	.50	-0.12	-2.02
CS7	1	0	1	.56	.50	-0.24	-1.97
CS11	1	0	1	.71	.46	-0.93	-1.15
CS12	1	0	1	.75	.43	-1.19	-0.59
CS13	1	0	1	.48	.50	0.09	-2.02
CS14	1	0	1	.50	.50	0.00	-2.03
CS15	1	0	1	.51	.50	-0.03	-2.03

Table D9

Descriptive Statistics of Each Item in Word Order Test

N=134 Item	Possible range	Min	Max	Mean	SD	Skewness SE=.209	Kurtosis SE=.416
WO1	2.0	0.0	2.0	1.73	0.62	-2.11	2.89
WO3	2.0	0.0	2.0	1.85	0.48	-3.14	8.62
WO4	2.0	0.0	2.0	1.82	0.42	-3.00	9.40
WO5	2.0	0.0	2.0	1.86	0.46	-3.42	10.48
WO6	2.0	0.0	2.0	1.90	0.36	-4.23	18.17
WO7	2.0	0.0	2.0	1.84	0.46	-3.05	8.54
WO8	2.0	0.0	2.0	0.73	0.83	0.55	-1.37
WO9	2.0	0.0	2.0	0.99	0.75	0.01	-1.40
WO10	2.0	0.0	2.0	1.14	0.91	-0.27	-1.78
WO11	2.0	0.0	2.0	0.91	0.81	0.23	-1.53
WO12	2.0	0.0	2.0	1.51	0.79	-1.22	-0.29
WO13	2.0	0.0	2.0	0.40	0.74	1.55	0.65
WO14	2.0	0.0	2.0	0.76	0.90	0.50	-1.62
WO15	2.0	0.0	2.0	0.37	0.67	1.57	1.00

Table D10

Descriptive Statistics of Each Item in Grammaticality Judgement Test

N=134 Item	Possible range	Min	Max	Mean	SD	Skewness SE=.209	Kurtosis SE=.416
GJT1	2	0	2	1.25	.95	-.53	-1.69
GJT3	2	0	2	.70	.93	.63	-1.57
GJT4	2	0	2	1.64	.73	-1.68	1.05
GJT5	2	0	2	1.65	.74	-1.72	1.11
GJT6	2	0	2	.54	.82	1.04	-.69
GJT7	2	0	2	1.49	.84	-1.12	-.63
GJT8	2	0	2	1.31	.90	-.66	-1.46
GJT9	2	0	2	1.16	.94	-.33	-1.79
GJT10	2	0	2	1.11	.97	-.23	-1.92
GJT11	2	0	2	1.32	.94	-.69	-1.52
GJT12	2	0	2	.81	.96	.38	-1.82
GJT13	2	0	2	.69	.93	.67	-1.52
GJT14	2	0	2	1.53	.82	-1.26	-.30
GJT15	2	0	2	.56	.90	.99	-1.02

GJT16	2	0	2	1.45	.87	-1.01	-.91

Table D11

Descriptive Statistics of Each Item in Multiple Choice Test

N=134 Item	Possible range	Min	Max	Mean	SD	Skewness SE=.209	Kurtosis SE=.416
RC2	2	0	2	1.70	0.72	-1.99	1.99
RC3	2	0	2	1.70	0.72	-1.99	1.99
RC4	2	0	2	1.61	0.79	-1.57	0.46
RC6	2	0	2	1.51	0.86	-1.19	-0.59
RC7	2	0	2	1.60	0.81	-1.51	0.27
RC8	2	0	2	.91	1.00	0.18	-2.00
RC9	2	0	2	1.39	0.93	-0.85	-1.29
RC10	2	0	2	1.10	1.00	-0.21	-1.98
RC11	2	0	2	1.58	0.82	-1.45	0.10
RC14	2	0	2	1.42	0.91	-0.93	-1.15
RC15	2	0	2	1.06	1.00	-0.12	-2.02
RC16	2	0	2	1.07	1.00	-0.15	-2.01
RC19	2	0	2	1.04	1.00	-0.09	-2.02
RC20	2	0	2	1.16	0.99	-0.34	-1.92

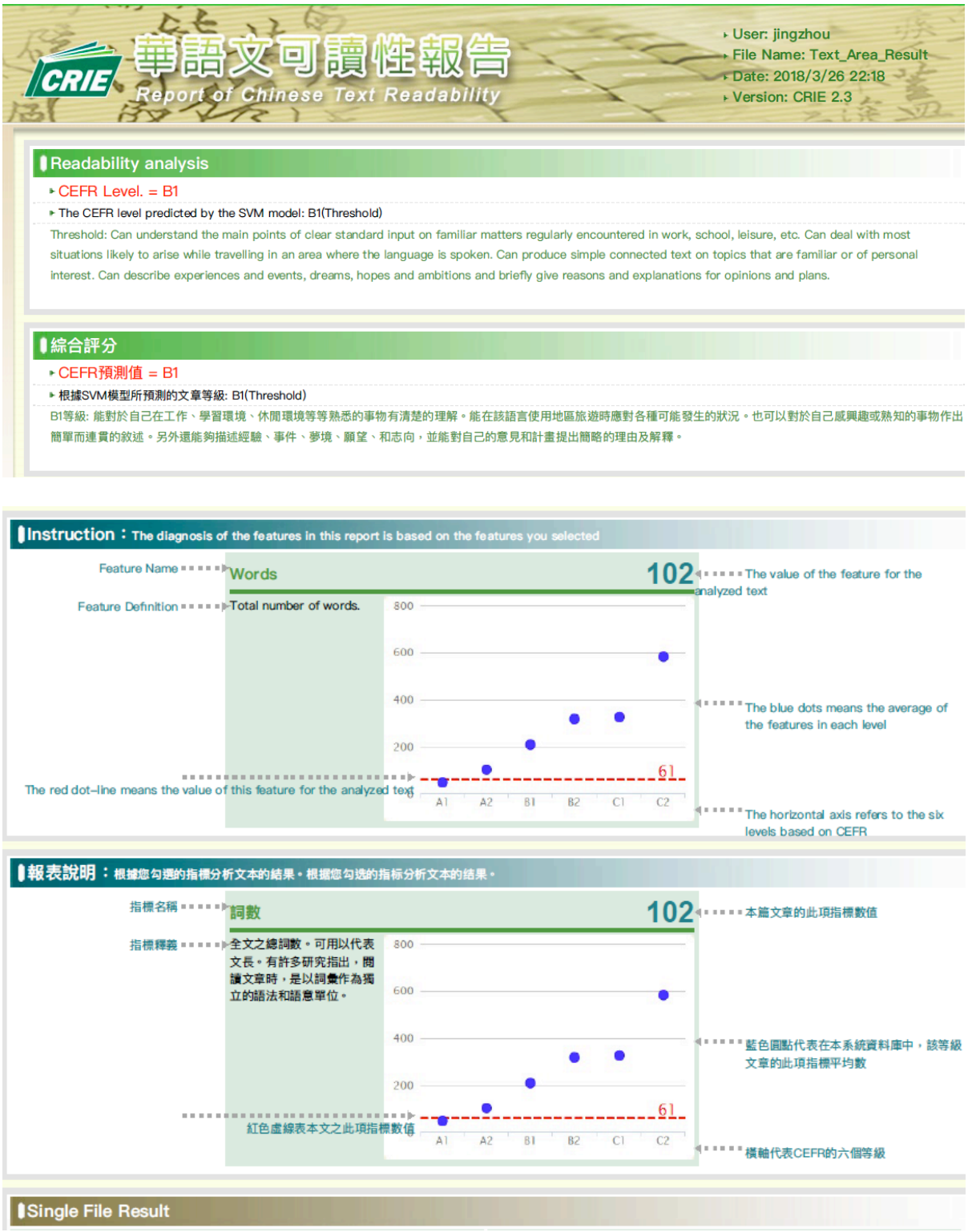
Table D12

Descriptive Statistics of Each Item in Cloze Test

N=134 Item	Possible range	Min	Max	Mean	SD	Skewness SE=.209	Kurtosis SE=.416
CT1	1	0	1	.83	.38	-1.76	1.12
CT2	1	0	1	.47	.50	.12	-2.02
CT5	1	0	1	.61	.49	-.46	-1.81
CT6	1	0	1	.64	.48	-.60	-1.67
CT8	1	0	1	.77	.42	-1.29	-.34
CT9	1	0	1	.41	.49	.37	-1.89
CT10	1	0	1	.25	.43	1.19	-.59
CT11	1	0	1	.54	.50	-.18	-2.00
CT12	1	0	1	.65	.48	-.63	-1.62
CT13	1	0	1	.54	.50	-.18	-2.00
CT14	1	0	1	.74	.44	-1.10	-.80

CT15	1	0	1	.21	.41	1.45	.10
CT16	1	0	1	.28	.45	.97	-1.07
CT17	1	0	1	.45	.50	.21	-1.98
CT18	1	0	1	.37	.48	.56	-1.71
CT19	1	0	1	.64	.48	-.60	-1.67
CT20	1	0	1	.70	.46	-.89	-1.23
CT21	1	0	1	.09	.29	2.91	6.55
CT22	1	0	1	.53	.50	-.12	-2.02
CT23	1	0	1	.22	.41	1.39	-.06
CT24	1	0	1	.31	.47	.81	-1.36
CT25	1	0	1	.15	.36	1.99	1.99
CT26	1	0	1	.19	.39	1.63	.66
CT27	1	0	1	.60	.49	-.43	-1.84
CT29	1	0	1	.47	.50	.12	-2.02
CT30	1	0	1	.33	.47	.74	-1.48
CT31	1	0	1	.29	.46	.93	-1.15
CT32	1	0	1	.25	.44	1.14	-.70
CT33	1	0	1	.28	.45	1.01	-.99
CT34	1	0	1	.58	.50	-.34	-1.92
CT35	1	0	1	.13	.33	2.27	3.19
CT36	1	0	1	.04	.19	4.94	22.72
CT37	1	0	1	.16	.37	1.83	1.38

Appendix E: The Readability Levels of the Four Reading Passages
Passage 1 Report

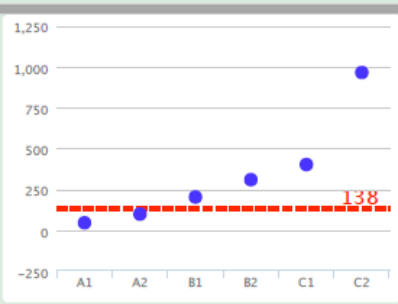


Characters 207

Total number of characters

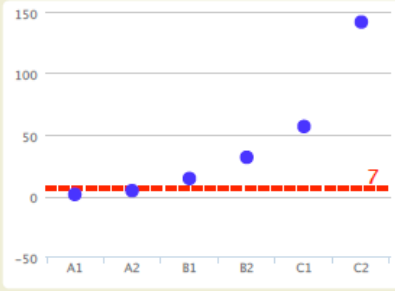
Words 138

Total number of words



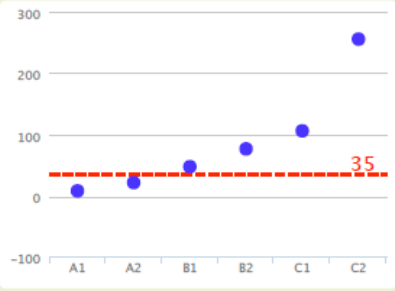
High-level words 7

Total number of words belonging to the vantage and effective operational proficiency levels of 8000 Words in Chinese



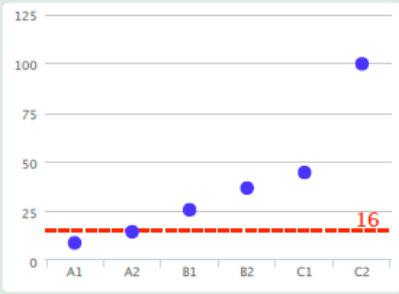
Difficult words 35

Number of words not in the frequently-used word list



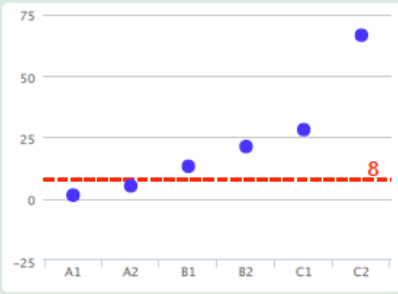
Sentences 16

Number of sentences.



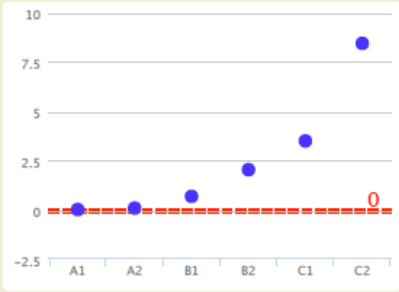
Sentences with complex structure 8

The number of sentences constructed by conjunctions and subordinators



Number of Idioms 0

Idioms do not follow compositionality. The meaning of an idiom is not the sum of the literal meanings of words inside within in. Therefore, idioms are considered to be an learning difficulty for both native and second language learners.



字數 207

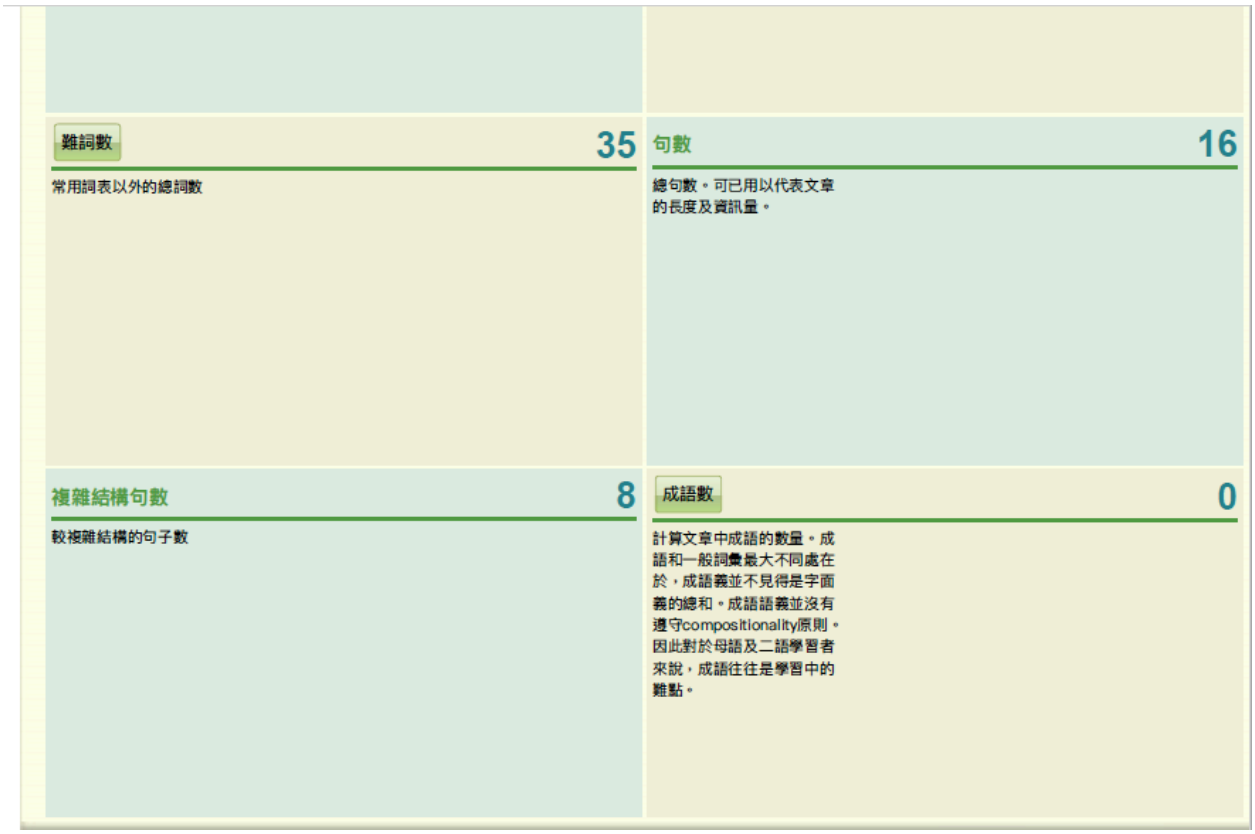
全文之總字數，可用以代表文長。中文是屬於「意符」的文字系統，字（Character）是中文特有的書寫單位。

詞數 138

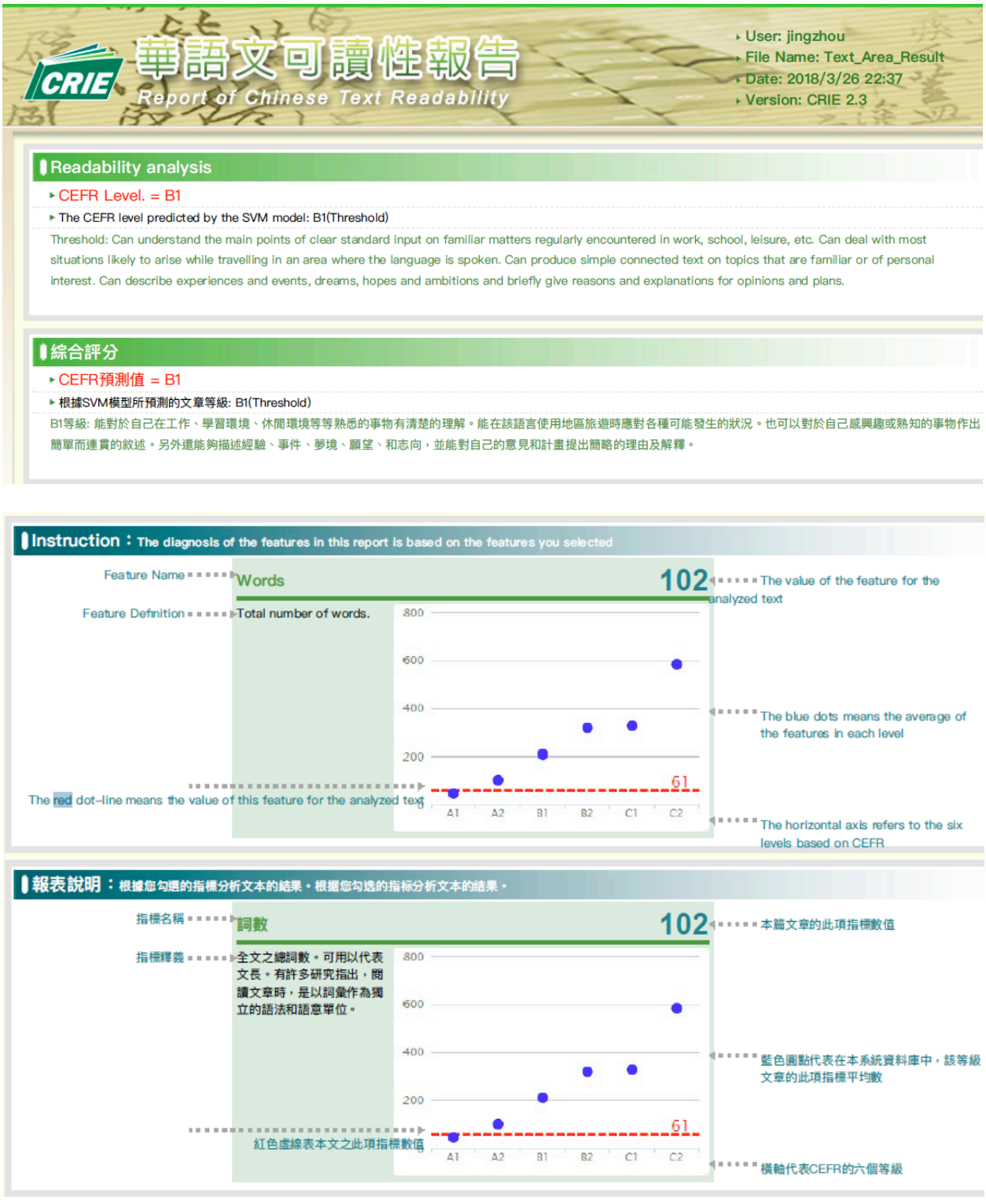
全文之總詞數。可用以代表文長。有許多研究指出，閱讀文章時，是以詞彙作為獨立的語法和語意單位。

高難度詞數 7

加總文章中屬於華語八千詞中高階級及流利級詞彙


難詞數
35
常用詞表以外的總詞數
句數
16
總句數。可已用以代表文章的長度及資訊量。
複雜結構句數
8
較複雜結構的句子數
成語數
0
計算文章中成語的數量。成語和一般詞彙最大不同處在於，成語義並不見得是字面義的總和。成語語義並沒有遵守compositionality原則。因此對於母語及二語學習者來說，成語往往是學習中的難點。

Passage 2 Report

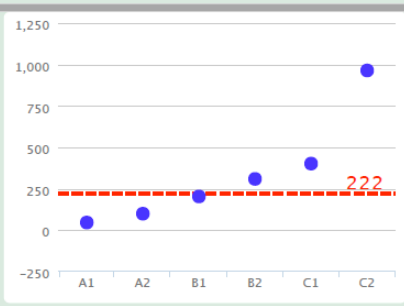


Characters 337

Total number of characters

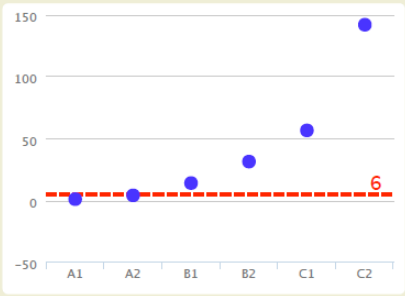
Words 222

Total number of words



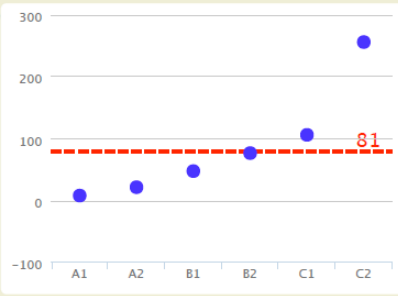
High-level words 6

Total number of words belonging to the vantage and effective operational proficiency levels of 8000 Words in Chinese



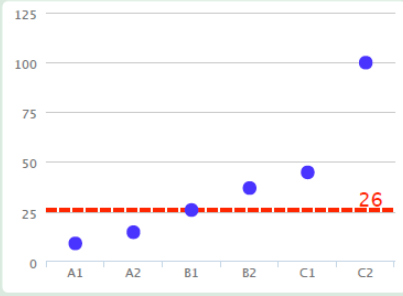
Difficult words 81

Number of words not in the frequently-used word list



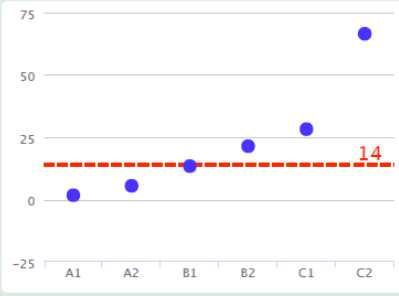
Sentences 26

Number of sentences.



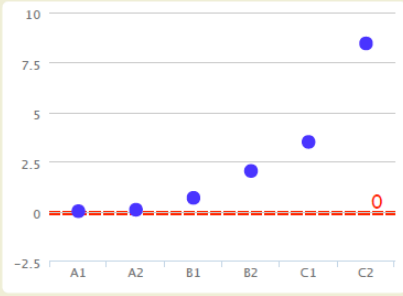
Sentences with complex structure 14

The number of sentences constructed by conjunctions and subordinators



Number of Idioms 0

Idioms do not follow compositionality. The meaning of an idiom is not the sum of the literal meanings of words inside within in. Therefore, idioms are considered to be an learning difficulty for both native and second language learners.



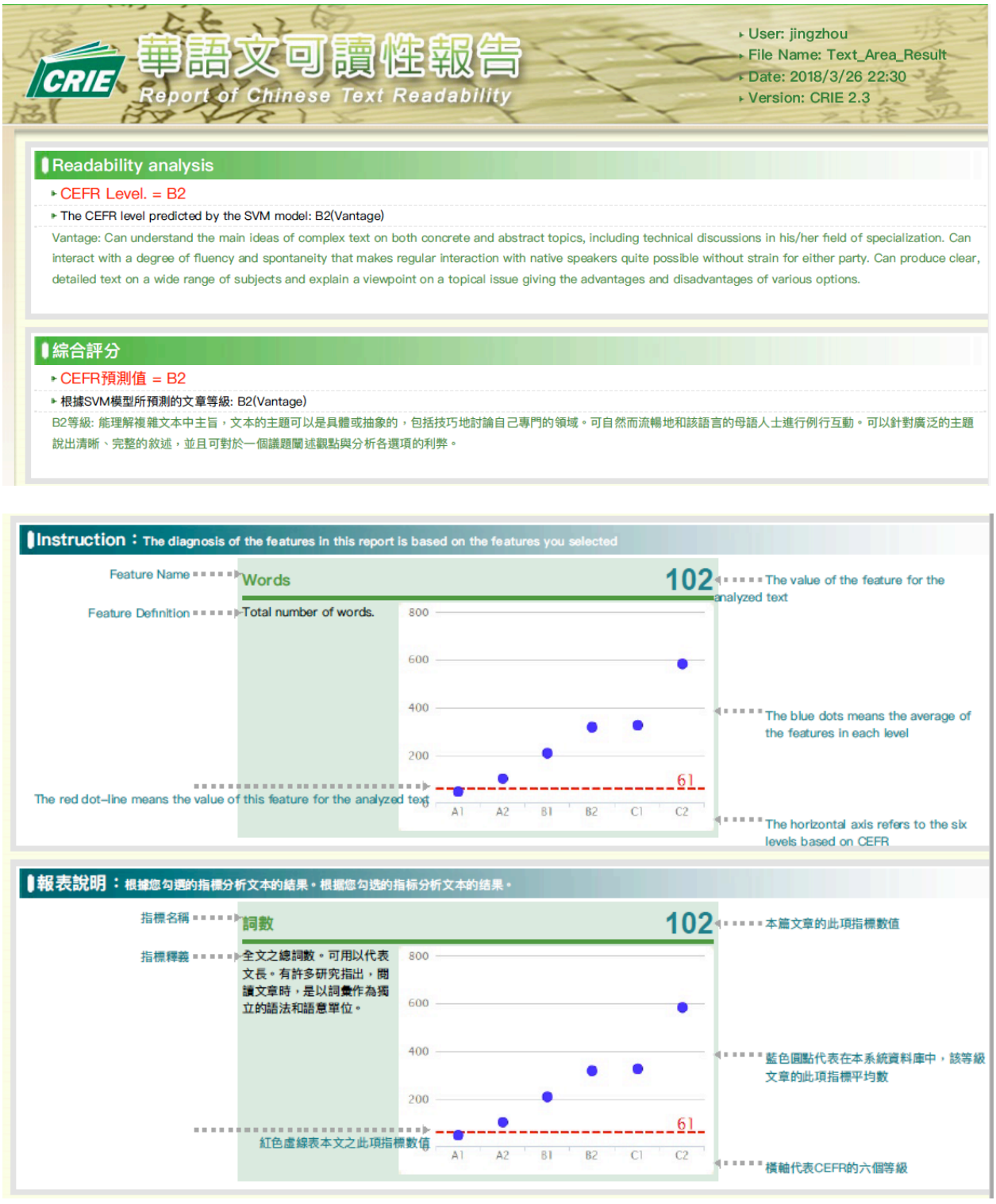
字數 337

全文之總字數，可用以代表文長。中文是屬於「意符」的文字系統，字（Character）是中文特有的書寫單位。

詞數	222	高難度詞數	6
全文之總詞數。可用以代表文長。有許多研究指出，閱讀文章時，是以詞彙作為獨立的語法和語意單位。		加總文章中屬於華語八千詞中高階級及流利級詞彙	
難詞數	81	句數	26
常用詞表以外的總詞數		總句數。可已用以代表文章的長度及資訊量。	

複雜結構句數	14	成語數	0
較複雜結構的句子數		計算文章中成語的數量。成語和一般詞彙最大不同處在於，成語義並不見得是字面義的總和。成語語義並沒有遵守compositionality原則。因此對於母語及二語學習者來說，成語往往是學習中的難點。	

Passage 3 Report

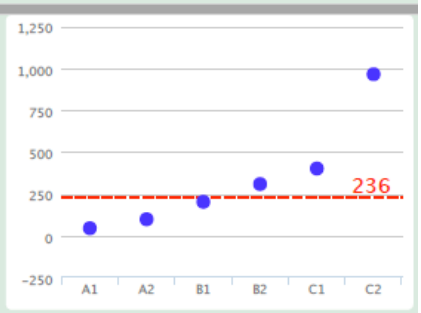


Characters 359

Total number of characters

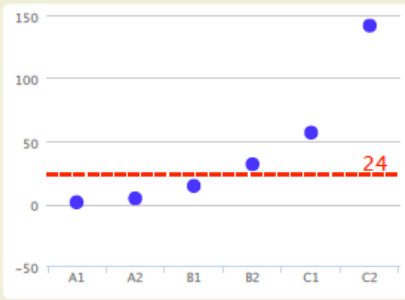
Words 236

Total number of words



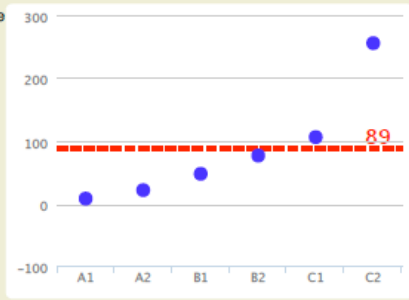
High-level words 24

Total number of words belonging to the vantage and effective operational proficiency levels of 8000 Words in Chinese



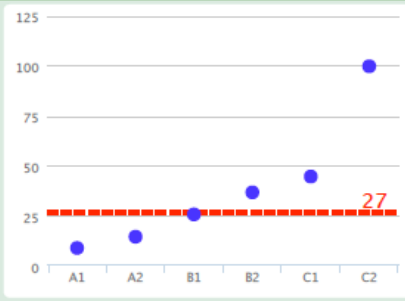
Difficult words 89

Number of words not in the frequently-used word list



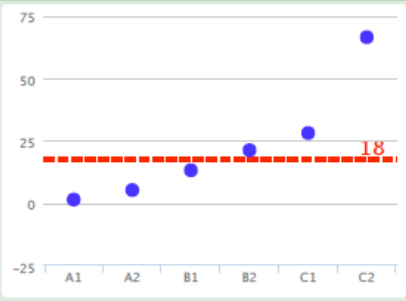
Sentences 27

Number of sentences.



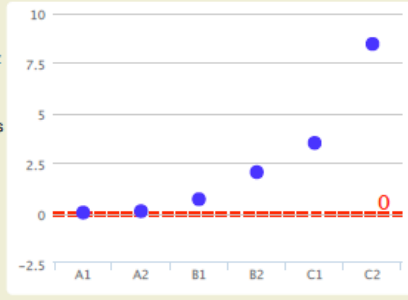
Sentences with complex structure 18

The number of sentences constructed by conjunctions and subordinators



Number of Idioms 0

Idioms do not follow compositionality. The meaning of an idiom is not the sum of the literal meanings of words inside within in. Therefore, idioms are considered to be an learning difficulty for both native and second language learners.

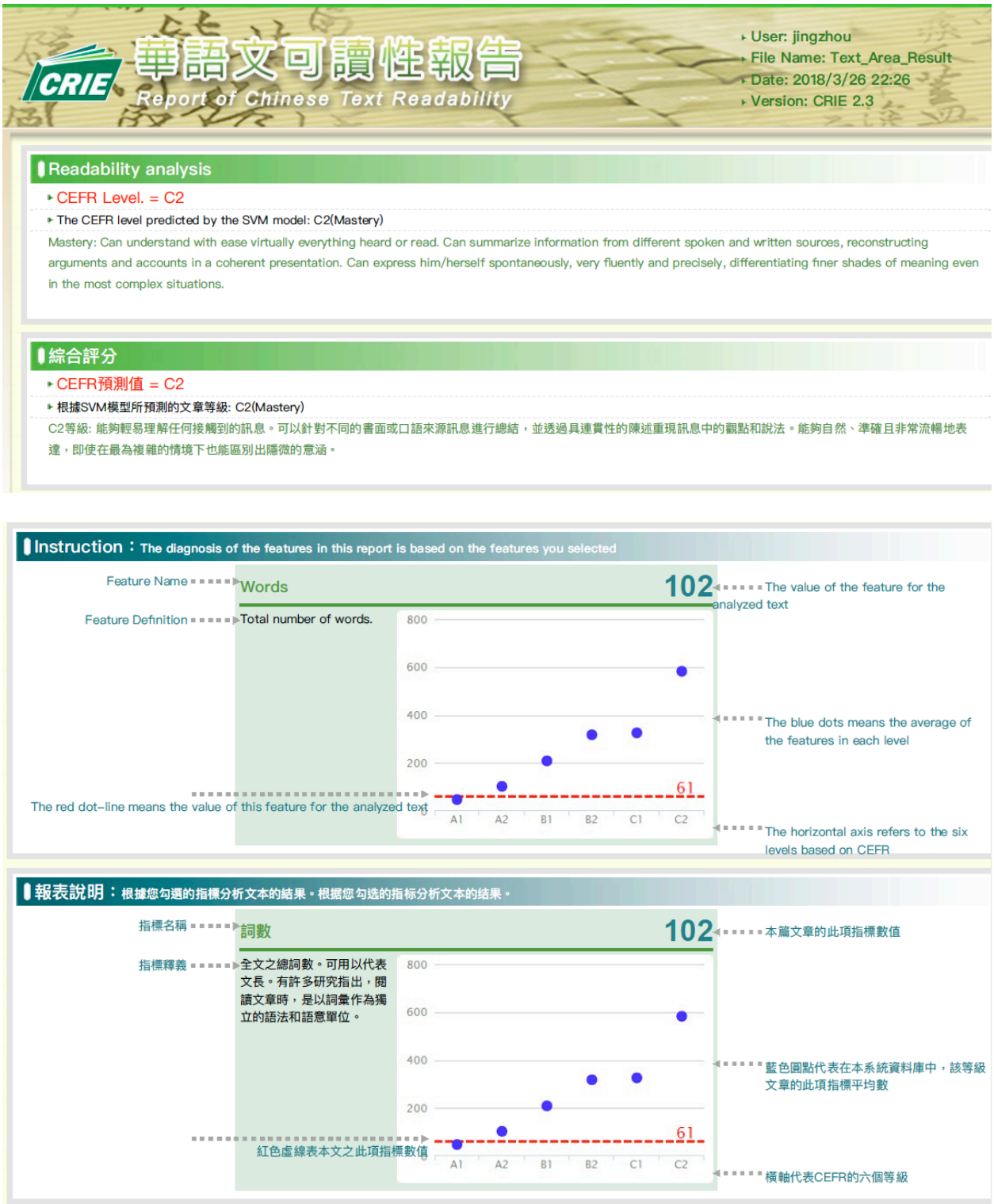


字數 359

全文之總字數，可用以代表文長。中文是屬於「意符」的文字系統，字（Character）是中文特有的書寫單位。


詞數
236
全文之總詞數。可用以代表文長。有許多研究指出，閱讀文章時，是以詞彙作為獨立的語法和語意單位。
高難度詞數
24
加總文章中屬於華語八千詞中高階級及流利級詞彙
難詞數
89
常用詞表以外的總詞數
句數
27
總句數。可已用以代表文章的長度及資訊量。
複雜結構句數
18
較複雜結構的句子數
成語數
0
計算文章中成語的數量。成語和一般詞彙最大不同處在於，成語義並不見得是字面義的總和。成語語義並沒有遵守compositionality原則。因此對於母語及二語學習者來說，成語往往是學習中的難點。

Passage 4 Report



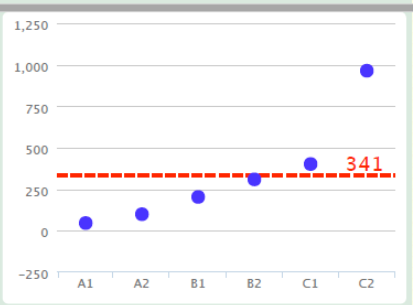
Single File Result

Characters 595

Total number of characters

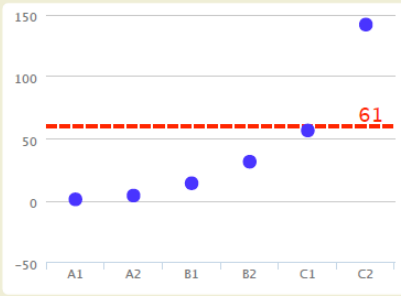
Words 341

Total number of words



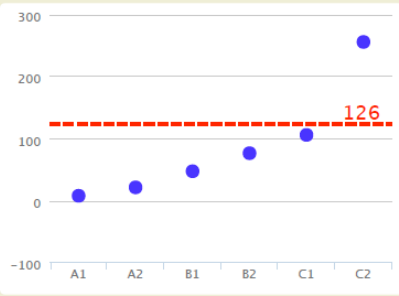
High-level words 61

Total number of words belonging to the vantage and effective operational proficiency levels of 8000 Words in Chinese



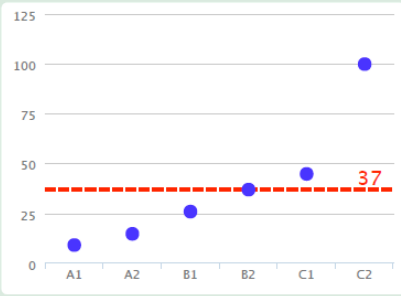
Difficult words 126

Number of words not in the frequently-used word list



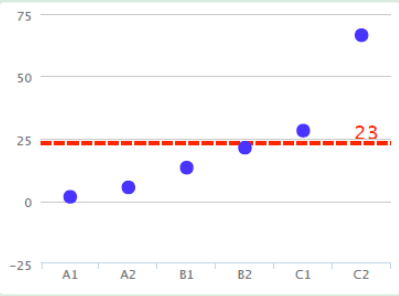
Sentences 37

Number of sentences.



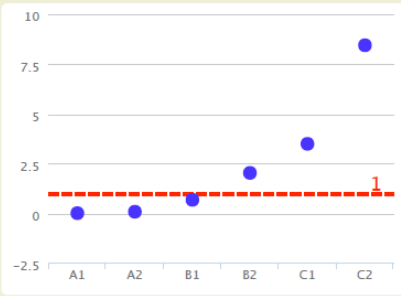
Sentences with complex structure 23

The number of sentences constructed by conjunctions and subordinators



Number of Idioms 1

Idioms do not follow compositionality. The meaning of an idiom is not the sum of the literal meanings of words inside within in. Therefore, idioms are considered to be an learning difficulty for both native and second language learners.



字數 595

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詞數
341
全文之總詞數。可用以代表文長。有許多研究指出，閱讀文章時，是以詞彙作為獨立的語法和語意單位。
高難度詞數
61
加總文章中屬於華語八千詞中高階級及流利級詞彙
難詞數
126
常用詞表以外的總詞數
句數
37
總句數。可已用以代表文章的長度及資訊量。
複雜結構句數
23
較複雜結構的句子數
成語數
1
計算文章中成語的數量。成語和一般詞彙最大不同處在於，成語義並不見得是字面義的總和。成語語義並沒有遵守compositionality原則。因此對於母語及二語學習者來說，成語往往是學習中的難點。